THE ARMED FORCES COMPTROLLER

WASHINGTON, D. C.
SEPTEMBER 1957

VOLUME II NUMBER 3

YOUR
NATIONAL PROFESSIONAL ASSOCIATION

The American Society of Military Comptrollers

ASMC

is a continuation of the Society of Military Accountants and Statisticians founded in San Antonio, Texas on 12 May 1949. This was prior to the enactment by the Congress of Title IV of the National Security Act, which established a Comptroller in the Department of Defense and in each of the Military Departments.

The American Society of Military Comptrollers expands the base of the original Society, not only in membership eligibility, but also in scope of activities. ASMC now extends full membership to Civilian Personnel, as well as to Military Personnel; and encompasses the full range of professional interests normally found within the framework of Military Comptrollership. The Constitution recognizes the breadth of these interests, specifically mentioning—

Budgeting
Accounting
Finance
Reports and Statistics
Auditing
Organization
Management
Analysis
Application of Mathematics in Comptroller Functions
Related Activities

ASMC is interested in all echelons and areas of Military Comptrollership. Small Local Chapters, as well as the Metropolitan Chapters, have been of great service to the Membership.

PURPOSE OF ASMC

The American Society of Military Comptrollers is designed to—

1. Provide an informal vehicle through which members who are engaged in Comptrollership in the Defense Department, the Army, Navy, Air Force, Marine Corps, and the Coast Guard may, through (a) combined action, (b) application of advanced knowledge and techniques, and (c) sound management, assist in maintaining and improving the high standards of the Profession of Military Comptrollership.

2. Foster a spirit of fellowship among its members.

3. Perpetuate friendships and traditions created through mutual service within the Armed Forces of the United States of America.

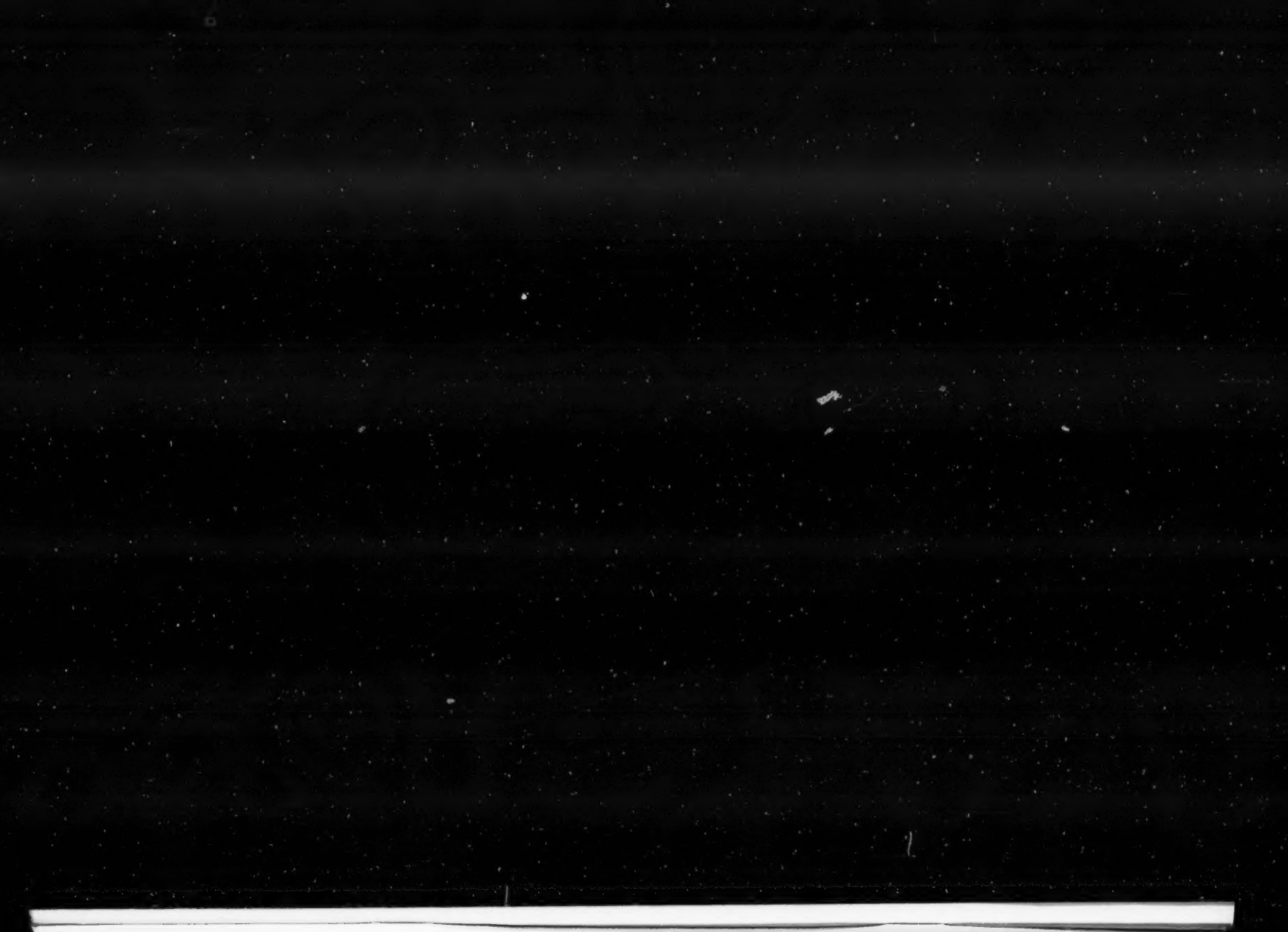
MEMBERSHIP

The American Society of Military Comptrollers has three classes of membership:

(1) Active Member, (2) Life Member, and (3) Honorary Member.

Active Membership is open to those who are (or have been) Commissioned Officers, Warrant Officers, or Civil Service Employees who are (or have been) required to exercise their abilities in the field of Comptrollership; have achieved a high standing and position of responsibility and respect in this field; are sponsored by two Active Members; and submit acceptable applications.

There are no initiation fees for membership in the Society. Dues for Active Members are five dollars for the first year, and three dollars for each year thereafter. Local Chapters may add a reasonable surcharge to cover their operating expenses.



GREETINGS FROM ADMIRAL CLEXTON
National President of ASMC

The National Officers and Members of the National Council welcome you to YOUR FIRST NATIONAL CONVENTION held in Washington, D. C., 21-22 November 1957, and sponsored by your Washington Chapter. I know you will join with me in thanks to the Washington Chapter President, Mr. John H. Prince of the Coast Guard and all his associates for their fine work in bringing the Convention into being.

Your Past Presidents have all sent their Best Wishes for a GREAT CONVENTION, and I still hope some of them will find it possible to be present. Lt. General William D. Eckert, USAF, as you know, is now Vice Commander of the Tactical Air Command, and very busy. Major General Bickford E. Sawyer, USA(Ret.) is in Florida, and his calling card reads: "Retired - No Address - No Phone - No Money - No Business". This last we doubt, for we hear rumors that "Bick" is one of the civic leaders in Clearwater and surrounding territory. Colonel John E. Bodle, USAF(Ret.), also in Florida, is boning up his business administration and social science, and you will hear from him later as a University Professor. Captain Joseph C. Armour, USA, is going strong as a Comptroller in Fort Benjamin Harrison. "Joe", as you all know, was the first President of our Society.

I wish to extend my appreciation also to all National Officers, Council Members, Assistant National Secretaries, and to all Chapter Officers and all Members, including Members-at-Large, for their excellent participation in ASMC affairs, which has made our development possible.

I predict continued success for the Society in advancing the profession of Military Comptrollership throughout all the Armed Forces.

Edward W. Clexton

Edward W. Clexton
Vice Admiral, USN
President of ASMC

"The Armed Forces Comptroller" is a forum for the presentation of the activities of Military Comptrollership. The views expressed by the authors of articles herein, therefore, do not necessarily represent the views of the Government Agency, the Armed Forces or the National Council of the American Society of Military Comptrollers.

* * * * * * * * * * *

Copyright

By

AMERICAN SOCIETY OF MILITARY COMPTROLLERS

1957

Washington, D. C.

Yearly Subscription: Members $2 Non-Members $3

Second Class Mail Entry Authorized at Washington, D. C.

Executive Director
And
Editor

Major Louis A. Oswald, USAF
Headquarters
Military Air Transport Service
c/o DCS/Comptroller
Washington 25, D. C.

THE ARMED FORCES COMPTROLLER

Quarterly National Journal

Vol. II No. 3
September 1957

CONTENTS

Page

GREETINGS FROM VICE ADMIRAL EDWARD W. CLEXTON, USN
National President of ASMC i

NATIONAL OFFICERS OF ASMC v

BEST WISHES FROM THE HONORABLE W. J. McNEIL
Assistant Secretary of Defense (Comptroller) vi

MESSAGE FROM LT. GENERAL WILLIAM D. ECKERT, USAF
Past President of ASMC vii

BEST WISHES FROM MAJOR GENERAL BICKFORD E. SAWYER, USA(Ret)
Past President of ASMC viii

MESSAGE FROM CAPTAIN JOSEPH C. ARMOUR, USA
Past President of ASMC ix

MILITARY COMPTROLLER RESPONSIBILITIES IN APPLICATION OF COMMERCIAL ACCOUNTING AND FINANCIAL MANAGEMENT TECHNIQUES
Lee R. Shannon, Deputy Assistant Secretary of Defense (Comptroller) 1

COMPTROLLERSHIP IN THE NAVY
The Honorable J. Sinclair Armstrong 4

CURRENT ASPECTS OF ARMY COMPTROLLERSHIP
Lieut. General Wm. S. Lawton, USA 7

FINANCIAL MANAGEMENT IN THE UNITED STATES MARINE CORPS
Brigadier General F. L. Wiesman, USMC 10

CONSTRUCTIVE ASPECTS OF GENERAL ACCOUNTING OFFICE REPORTING
Lawrence J. Powers 12

THE CHALLENGE FACED BY OPERATIONS STATISTICS
Major Robert M. Dean, USAF 14

THE NAVY MANAGEMENT OFFICE
Robert F. Graham 17

ARMY MANAGEMENT STRUCTURE — A Framework for Army Management
Lt. Col. James M. Cochran, USA 21

THE USE OF MANAGEMENT ENGINEERING TECHNIQUES IN THE COMPTROLLER FIELD
Lt. Col. John R. Westwood, USAF, and Emil Marecki 25

Page

UNIFICATION AND INTERNATIONAL COOPERATION AT WORK IN THE PARIS CHAPTER
D. F. McGrath 27

FINANCIAL PLANNING AND MANAGEMENT AT THE PEARL HARBOR NAVAL SHIPYARD
Captain Frank G. Springer, USN 28

A LOOK AT BUSINESS AUTOMATION IN THE ARMY
J. Paul Kingston. 32

FINANCIAL MANAGEMENT IN MILITARY SEA TRANSPORTATION SERVICE
S. H. Howard 36

AVOIDING SOME STATISTICAL PITFALLS
Theodore E. Whiting 39

FINANCIAL MANAGEMENT MOVES FORWARD IN BUREAU OF ORDNANCE (Navy)
W. S. Williams. 41

PERFORMANCE STANDARDS IN THE ORDNANCE CORPS (Army)
W. W. Storey and N. Kobert 47

MACHINE ACCOUNTING AT NAVAL INDUSTRIAL ORDNANCE PLANT
Charles W. Mowrey 51

NAVY REPORTS MANAGEMENT
Sara B. Motley. 53

NATIONAL OFFICERS
AMERICAN SOCIETY OF MILITARY COMPTROLLERS

VICE ADMIRAL EDWARD W. CLEXTON
PRESIDENT

ROBERT D. KING
VICE PRESIDENT

NORWOOD P. CASSIDY
VICE PRESIDENT

MAJOR LOUIS A. OSWALD
EXECUTIVE DIRECTOR

MAJOR SAMUEL V. ANTHONE
GENERAL COUNSEL

THOMAS B. CROSSAN, JR.
COMPTROLLER

COLONEL ERNEST L. OSBORNE
NATIONAL SECRETARY

* * * * * * * * * * * * * * * * * * *

ASSISTANT NATIONAL SECRETARIES

THOMAS J. HICKEY
NAVY

CHARLES E. MacNEALY
AIR FORCE

RICHARD V. SAWYER
ARMY

ASSISTANT SECRETARY OF DEFENSE
WASHINGTON 25, D. C.

COMPTROLLER

October 30, 1957

Dear Admiral Clexton:

This is to convey my best wishes to the American Society of Military Comptrollers on the occasion of the First National Convention to be held on 21-22 November 1957 in Washington, D.C. The Society has shown itself to be a constructively helpful force, assisting the maintenance and improvement within the military departments of high professional standards in the field of financial management.

When originally organized in 1949 as the Society of Military Accountants and Statisticians the membership was limited to Commissioned and Warrant Officers of the Armed Forces, and was primarily concerned with the fields of accounting and statistics. Coincidentally, 1949 is the year of enactment and approval of Title IV of the National Security Act which, in effect, is the "charter" for Comptrollership in the military departments.

When the Society changed its name in 1955 to the American Society of Military Comptrollers, it formally included in its sphere of interest the fields of Budgeting, Accounting, Finance, Reports and Statistics, Auditing, Organization, Management, and Analysis. Also, it expanded membership eligibility to Civil Service personnel. Membership now includes uniformed personnel of the Army, Navy, Air Force, Marine Corps, and Coast Guard, and Civil Service personnel.

The Society justifiably can be proud of the progress it has made in extending its Chapters and membership, and in providing a helpful and effective influence in contributing to the improvement of Comptrollership in the Military Departments.

I am confident that its future progress will be even greater.

Sincerely,

W. J. McNeil

Vice Admiral E. W. Clexton
President, American Society
of Military Comptrollers
Room 2010, Main Navy Building
Washington 25, D. C.

MESSAGE FROM LT. GENERAL ECKERT
The Last President of "SMAS" and
The First President of "ASMC"

At this, our First National Convention, I congratulate the entire membership on the outstanding progress achieved by the organization since its inception in 1949 as the Society of Military Accountants and Statisticians (SMAS). A significant milestone in our growth has been the reorganization and expansion of the original Society to include the entire Comptroller field under the American Society of Military Comptrollers (ASMC).

Our organization is founded on the highest type objectives. It is designed to promote the exchange and consolidation of ideas among senior military and civilian Comptroller personnel in order that we may render greater service to military managers at all echelons of command throughout the Department of Defense and the Coast Guard. The steady and large increase in the number of chapters and the professional quality of "The Armed Forces Comptroller" are indicative of the stature of ASMC. The importance of this organization and the contributions of its members to the defense effort are immeasurable in these times when advancing technology and increasing cost of weapons systems require constant and intelligent re-evaluation of programs, at all levels, to insure a strong military posture at the lowest possible cost.

In accord with our stated objectives, the Society has provided, and I am sure will continue to provide, an important vehicle for developing, in an informal way, the spirit of coordination among Comptroller personnel in all branches of the Department of Defense and the Coast Guard. The Society draws its members from all the Services, and by working together and sharing our problems, we contribute to the improved efficiency and effectiveness of the Armed Forces. Under the leadership of our new President, I look forward to continued progress and growth in the coming year.

William D. Eckert
Lt. General, USAF
Past President

BEST WISHES FROM GENERAL SAWYER
Founding Member and Past President

My heartiest congratulations and best wishes to the officers and members of the American Society of Military Comptrollers on the occasion of our First National Convention.

I remember the first meeting of the Society in 1949 at Fort Sam Houston, Texas, when the first National Officers were elected by a group of Army and Air Force officers. At that time, the date when the Society would have ten chapters and, under the constitution, could hold a National Convention seemed a long way in the future.

Under the able leadership of its officers, I have watched the Society make a sound and steady growth. New chapters have been established, not only in the United States, but world-wide. The Navy and Coast Guard are now well represented and active as well as the Army, Air Force and Marine Corps. The aims of the Society have proved to be sound by their acceptance by all branches of the armed Forces.

I shall continue to watch the Society expand and extend to other areas. As a Founding Member and Past President, although now retired from active service, I shall always feel I am one of you.

Again, my best wishes.

Bickford E. Sawyer,
Major General, USA, Retired

MESSAGE FROM CAPTAIN JOSEPH C. ARMOUR
Founding Member and First President

MINUTES OF A MEETING OF A GROUP OF
OFFICERS OF THE ARMED FORCES
12 MAY 1949

1. A group of Officers of the Armed Forces met on the 12th day of May, 1949, at 1900 hours at the Brooke Army Medical Center Officers' Club, Fort Sam Houston, Texas, for the purpose of organizing the Society of Military Accountants and Statisticians. Those present are indicated by their signatures to the Constitution attached.

2. 1st Lieutenant Joseph C. Armour was chosen as temporary Chairman and Captain Garnett M. Burum as Secretary pro tem.

3. A draft of a proposed constitution was offered by Captain Samuel V. Anthone for consideration. After discussion it was moved and seconded to adopt the Constitution as presented.

4. The Constitution was unanimously adopted and signed by the members present as Founding Members of the Society of Military Accountants and Statisticians. The signed copy of the Constitution is attached hereto and the Secretary was instructed to preserve same and turn it over to the permanent Secretary upon election of that officer.

5. There being no further business for this group, the meeting adjourned for the convening of the National Council of the new Society, at 2100 hours same date.

Respectfully submitted
/s/GARNETT M. BURUM
Secretary Pro Tem

The above is the document that brought our Society into being. The outcome of this gesture in eight years and six months is an organization, recognized and respected throughout the free world, with chapters scattered over the United States and in foreign countries. As compared to other independent professional societies, this progress is phenomenal as is our growth in membership. The membership list itself, is a veritable Who's Who of the Military Comptroller field. And to the entire list of members has to go the credit for this progress.

How did we get this way so quickly? First, the Society has a purpose (as set forth in the constitution) that fills a need in furthering our service to the Armed Forces and our country. And secondly, we are free from supervision by any agency, and our policies are our own. Only through this American principle of freedom can an individual or an organization progress and express itself in contributions of sound and original thinking.

The attribute of free expression and free interchange of ideas with unbiased analysis is our keystone.

Each successive group of officers of our Society has pursued these same far-sighted principles and to such leaders as Vice Admiral Clexton, Colonel Bodle, Major General Sawyer, Lt. General Eckert and their staffs we should be most grateful for a world-wide forum of free and friendly professional intercourse.

Joseph C. Armour
Captain, United States Army

!! NOTICE !!

! ALL MEMBERS OF ASMC !

Admiral Clexton urges YOU to send in

YOUR ARTICLE

For YOUR NATIONAL JOURNAL

"THE ARMED FORCES COMPTROLLER"

MILITARY COMPTROLLER RESPONSIBILITIES IN APPLICATION OF COMMERCIAL ACCOUNTING AND FINANCIAL MANAGEMENT TECHNIQUES

Lee R. Shannon
Deputy Assistant Secretary of Defense (Comptroller)

There is much discussion of our governmental financial responsibilities everywhere today. Economy must be practiced in greater earnestness and mounting evidence of effective and timely action is to be observed on every hand. Wastage and incompetence in the management of our resources in time of peace largely operates to withhold higher standards of living. Incompetence in the management of our resources in time of war may well have far more serious consequences. The Military Comptroller shares in the responsibilities of the Defense management team to assure competent management of Defense resources.

Management is the essential administrative task of Defense — management of people, management of programs, management of property and management of money. This management, to be fully effective, must be management in advance — carefully planned, intelligently programmed and subject to responsible controls. The Military Comptroller through appropriate budgetary and accounting channels plays an important part in the execution of this management in advance concept.

Money is the common denominator — the common measure of effort which permits weighing of the economic cost as well as the military value of the things Defense plans or does. Dollars provide a means for achieving the best possible balance in the utilization of resources. The Military Comptroller in the budget process provides the best means currently available to bring all Defense plans and programs together at one time and one place where Defense management may evaluate their priority.

The management team in Defense is faced with problems and requirements similar in many ways to private enterprise. The Military Comptroller contribution toward effective management likewise has a similar basic resemblance to that of his counterpart in private enterprise. In each case the job of the Comptroller, in the final analysis, is to collect, to analyze and to interpret the essential facts needed by management on which to base decisions and provide effective and continuing control of resources; then to present the facts simply and in a timely manner which will assist in correct decisions and actions; and further to provide and direct a competent system through which proper allocations and effective control over resources may be exercised. The comparison and similarity must be tempered by important differences between Defense and private enterprise in performance and task evaluation, in objectives and in the manner in which funds are supplied for day-to-day operations and the execution of programs.

The Comptroller in private enterprise can tell the manager rather quickly how well his firm or any of his program managers may be doing through flash interim sales and production reports — and the regularly scheduled, more formalized statements of profit and loss, balance sheet and related financial analyses. Flash interim sales reports, for example, may report total sales by broad trading areas each 8th, 15th, 23rd and final day of the month. Comparisons with sales in similar periods in preceding years and by projection with forecasts for the current period immediately spotlight any area where performance is lacking. The private industry manager can then act promptly to identify the weakness, if any, and move for adequate and timely correction. Thus, there is a constant customer "check and balance" which permits the development and application of equally effective controls over finance, manufacturing, sales — in fact over all facets of the business.

Defense does not have this valuable customer "check and balance" over its programs except perhaps in those limited industrial and commercial activities which are in themselves quite similar to commercial business. The ultimate test of whether Defense programs, that is weapons, training, supply systems, etc., are right is in combat. This places a great premium on sound judgment in the selection of Defense programs and in their management, and gives the Military Comptroller a materially different kind of a task than his industry counterpart.

The objective of management in private industry is to consistently produce a profit. The ultimate, as well as the immediate, goal is to maximize profits and maintain and improve solvency. The result, so far as the industry Comptroller is concerned, is to place great emphasis upon the provision of meticulous double entry bookkeeping controls over what the firm owns, what it owes and the progress being made through sales and profits to enhance and entrench the firm's position in its industry and to pay dividends and improve the ownership equity.

Authorizations to hire, buy, build and consume (obligational authority in Defense terms) are not accorded the same meticulous accounting control as commercial enterprises heretofore have placed more dependence in this area upon the results of actions taken responsive to the customer "checks and balances" earlier mentioned.

The objective of the Defense Establishment is the security of the United States. The "profit" test as ordinarily conceived cannot be applied. The Military Comptroller must provide other effective means to assist in the evaluation of performance and the control and allocation of resources. Through the years under the budgetary process this has led to emphasis in Defense upon more and more meticulous double entry bookkeeping for obligational authority (authorization to hire, buy, build and consume). Solution of the related problem of accounting for what is owned, what is owed and historical cost and expense is now being developed in accordance with recommendations made by various groups resulting from their studies in Defense financial management practices and from related legislation. The Military Comptroller has a vital interest in these developments and a serious responsibility to provide maximum pertinent and necessary information at the lowest possible cost. This challenge is great. The Military Comptroller and his advisers must consider carefully in their application of commercial business accounting and financial management techniques the extent to which the defense of the United States is actually a "business". It employs business and business practices. Perhaps it should use more of them but in the writer's opinion defense is not a "business" in any standard accepted sense of the term. Caution must be exercised by Military Comptrollers to tailor accounting systems and practices to the peculiar need and the non-commercial environment of the Defense Department.

Essentially, in the opinion of the writer, the objectives and functions of the Defense Establishment are public and governmental. The processes and factors entering into decisions concerning it are in a large measure political - more international than domestic. The measurement of performance in terms of objectives is political in peacetime and rests upon military success in wartime — all affecting national security.

This difference in objectives between Industry and Defense is particularly significant and must not be lost sight of as Military Comptrollers proceed toward the development and refinement of accounting and financial management techniques.

It is extremely desirable that Military Comptrollers, and their advisers, recognize another distinction between their accounting requirements and those of their profession in commercial enterprise; namely, the manner in which the Defense Establishment is supplied the funds for its operation and the execution of its programs. By and large, private industry gets its day-to-day operating funds from the sale of goods and services. The comparison, or "spread" between the cost of the product or service and the selling price is all important. This spread or margin is under constant surveillance by the Comptroller in private industry. It goes to the very heart of the business objective, that of maximizing profits. Most business organizations operate continuously, in good times and bad, under the pressures of relentless competition which forces management to devote ceaseless effort to cost reduction and product improvement. This competition is a great force for discipline and contributes substantially to the cohesiveness and unity of purpose of management in private industry.

Defense funds are provided through Congressional appropriation. Costs are tremendously important to Defense management but there is no "selling price" subject to competitive disciplines against which these costs can be measured. Many of the primary Defense purposes, particularly in combat and combat-type areas, are not financially measurable in any conventional use of the term. There are, of course, many secondary or subsidiary purposes which are financially measurable, such as the industrial and commercial-type activities. Defense managers in these measurable areas utilize effectiveiy the working capital funds and other financial tools whereby increased emphasis may be placed upon comparative and end product costs and where the Military Comptroller can assist his management by illustrating the performance showings through facts and figures. In these businesslike areas Military Comptrollers can and do emphasize, reporting the assets, the liabilities and the current performance reflecting revenue and costs in much the same manner as the industry comptroller. This is entirely practical and appropriate where the Defense activity secures its money from the sales of products or services and operates with a revolving fund. It does not follow that it is likewise appropriate, again from a practical viewpoint, when the funding is directly from an appropriation. The Military Comptroller must assist his management to account to Congress for the appropriation in the same way the Congress appropriates the money.

In this respect the Defense managers are very much in the position of a trust officer

charged with the management of a number of different trusts. Each trust must be managed and accounted for in strict accordance with its particular terms. The Defense Department is obliged to manage and account for each appropriation as if each were, in effect, a separate trust. Too frequently advisers to Defense have failed to recognize or to attach sufficient importance to this peculiarity which requires strict fiduciary accountability. Yet it is one which Military Comptrollers and Defense managers are under a firm responsibility to observe with exacting care.

In this connection the writer observes that while the allotment process as such is not generally employed in the accounting and financial management in private industry there are comparable management in advance controls over existing and prospective resources. These take the form of approved budgets for administrative and sales offices and similar staff or line organizations and for various level-of-effort programs, such as research and advertising. Product program control is effectively organized through production and procurement schedules, which in turn are tied firmly to sales estimates and inventory budgets, all subject to prompt revision to maintain a balance with the actual sales results. Because these limitations do not carry legal penalties as is the case with Defense allotments and are not always formalized into a comprehensive overall budget, their resemblance to the Defense system of allotment control of resources is not always recognized. As business organizations grow in size and complexity there develops a need for more meticulous accounting for the authorizations to hire, buy, build and consume, and thus accounting and budgetary techniques are developing in industry that resemble those in Defense for the management of obligational authority. At the same time we find Defense moving toward more meticulous accounting control of its assets, liabilities, and expenses and costs.

For Defense it is important that this trend result in a unified, integrated accounting structure with appropriate recognition of the need for fund accounting, property accounting and cost and expense accounting all in adequate balance. What is needed is not simply a transition, per se, to the traditional commercial balance sheet, profit and loss statement and accounting practices, but statements which severally but comprehensively set forth the status of the appropriation accounts, the assets and liabilities and the costs of executing the Defense programs with the entire accounting system tied directly to the appropriation and fund structures established by Congress. Interim flash reports with appropriate comparisons or yardsticks must be used wherever possible to alert Defense managers promptly to adverse trends or unfavorable prospects just as industry managers are alerted. The membership of the American Society for Military Comptrollers enjoys a timely opportunity to continue their valuable contribution toward maintaining appropriate and competent management of defense resources.

COMPTROLLERSHIP IN THE NAVY

The Honorable J. Sinclair Armstrong
Assistant Secretary of the Navy (Financial Management)
Comptroller, Department of the Navy

The structure of the Office of the Comptroller of the Department of the Navy was fully explained in the first issue of The Armed Forces Comptroller by the Honorable William B. Franke, the then Assistant Secretary of the Navy for Financial Management, who is now Under Secretary. As was pointed out in this article, the Secretary of the Navy has charged the Assistant Secretary of the Navy (FM), who is also designated by the Secretary as the Comptroller of the Navy, with the policy management and control of the functions of budgeting, progress and statistical reporting, accounting, financing, and auditing throughout the Department.

During the past fiscal year much has been accomplished within these functions. For the most part, the accomplishments have reflected improved financial management through accounting and budgetary changes which promote better control obligationwise of programs and performance. In addition, much time and effort has been devoted to the need to develop workable expenditure controls, especially in the light of the current expenditure limitation placed upon the military departments.

This expenditure limitation covers not only the appropriations made for the current fiscal year but all of the appropriations and funds available for expenditure within the Department of the Navy. The problem of expenditure control expands into three dimensions from the single dimension that was present when the sole limitation placed upon the military departments was an obligation limitation. In addition to the determination of the total money which would eventually be spent, it is now necessary to determine how and when such money will be spent. The factor of how and of when was not as important, relatively, in previous years when expenditure authority was not limited to the annual obligating authority, and the sole control of a program was in terms of the authority to obligate. The possibility of this requirement to control expenditures properly by the military departments was recognized in recent years when expenditure targets were placed upon the various military departments. However, expenditure forecasting within targets did not concern itself with the manner in which or the time when expenditure will be made to the same extent as is required when an annual expenditure limitation is assigned.

The establishment of budgets and the reporting of accomplishments to management must now be done not only in terms of obligations but also in terms of the rate at which a program is expected to unfold within its expenditure requirements. Not only must the material and services sought be evaluated, but the manner and time of financing such materials and services must be considered. The fiscal requirements of a fiscal period for the Department of the Navy must be correlated with the program plans and objectives developed within the framework of the strategic concepts and force levels prescribed by the Joint Chiefs of Staff.

In the past, the funding of capital items and long-lead items was considered solely within the requirement of total eventual expenditure. Now that expenditure limitations are expected to be imposed in subsequent years, it is necessary that these requirements be considered in terms of their effect upon the expenditure limitation of each succeeding year. This requires that at the time of budgeting for such an item, it is necessary that not only the total cost of the item be determined, but that the cash requirements to finance its completion be projected through the period of its accomplishment. To do this, it is necessary to determine at the time of budgeting in what manner the item will be procured as well as the time required for its production. The type of contract selected is significant in determining the payments that would flow during the period of production or procurement. The rate of expenditure would vary depending upon whether the contract of procurement was on a cost reimbursement basis, on a progress payment basis, on an advanced payment basis, on a delivery payment basis, with or without price redetermination, or on an incentive fixed price basis with limited billing prices.

The addition of the cash flow concept to budgeting makes it necessary in order to control expenditures that the functions of reporting, accounting, financing and auditing be further refined so that the pattern of expenditure, or of cost, or of use of available resources may be closely followed. To this end, certain programs have been completed and are being planned as follows:

a. Budget Control and Reporting. Within the imposed expenditure limitation it has become necessary to apply a variety of analytical and statistical techniques to insure orderly compliance at appropriate levels. Studies of program

content and the application of newly developed procedures for forecasting expenditures utilizing prior year experience permits the determination of control totals at various levels within the overall Department of the Navy limitation. Reports have been developed, compatible with the new modified system of fund accounting, to provide for more timely and accurate measures of relationship between the limitation and actual expenditures. Further effort is also being made to make statistics and analyses relating to performance within a financial plan available to Navy Top Management, including more frequent reporting of expenditures.

Continued emphasis has been placed upon appropriation review and program content. Elimination of areas of duplication and excess costs have resulted. As a result of this review the Navy Stock Fund was extended to include in fiscal year 1958 spare parts for major electronic equipment. Consideration is being given to extending the Navy Stock Fund to include load and allowance lists of tenders and repair ships. Further instructions were issued to clarify financial responsibility for various functional areas, both at headquarters and field levels.

b. Accounting. No analysis or review is effected unless the basic facts generated by the accounting system are related to the events to be controlled by top management. Progress reports must find their origin in the controls and information generated by the accounting system. With this end in view, a modified system of fund accounting was developed and installed on a Navy-wide basis on 1 July 1957. This system complies with the recent legislation which requires that accrued accounting systems and cost-based budgets be established in each executive agency of the Government. Under this new system all funds are administered under allotments; grantors are restricted to the issuance of one allotment under a budget activity per allottee; allotments are issued net of anticipated reimbursements for work performed for other activities; accounting for reimbursements is performed in the allotment and appropriation levels; and commitment accounting is extended to all levels. A better control of costs in the field of construction and maintenance is accomplished through the development of a system of accounting and a chart of accounts. The better use of property and its fuller control was made possible by improvements in the plant property accounting system.

The Navy Industrial Fund was extended in ordnance activities, shipyard activities and public works centers. Its use in overhaul and repair departments in naval air stations is being surveyed by an active working panel. Similar extensions have been made in the Navy Stock Fund. The most significant accomplishment was the implementation of the single manager medical material assignment.

The double entry accounting system is being extended to include accrual accounting and complete coverage of plant property and inventory. This control of property should result in a better planned future use of available assets, thereby permitting the reduction of furure expenditures for these available resources.

c. Financing. The control of expenditures is related to the amount of progress payments which a military department is required to make in the financing of its contracts. As of 30 June 1957, the unliquidated progress payments made by the Department of the Navy amounted to $1,757,022,621. Similarly, advanced payments made to prime contractors are a factor in controlling the cash flow under a contract. However, if these payments are reduced in an effort to bring expenditures within expenditure limitations, it will become necesssry for the Navy to grant support to contractors by means of guaranteed loans. At the end of the fiscal year 1957 the total available credit to Navy contractors amounted to $153,704,358, with an outstanding balance of $125,066,180. This credit does not effect expenditure limitations unless the Navy is required to buy up the guaranteed loan which does not occur frequently. It would appear that this method of financing would be preferred during a period of slow Government receipts and dissipated borrowing power.

d. Audit. Improvements in the financial structure of the Navy is made possible by the establishment of continuous internal audits throughout the Department. The primary objectives of the continuous program are to provide more timely disclosure of weaknesses in the financial management practices of the Navy and to render special assistance to local commanders within the framework of the internal audit responsibility assigned to the Comptroller of the Navy. Annual internal audits are conducted during the fiscal year at facilities not within the continuous audit jurisdiction. As a result of these audits, thousands of recommendations for improvement and corrective action have been made.

In addition to internal audit, three other divisions under a recent reorganization have been established in the Office of the Assistant Comptroller, Audit, namely, Contract Audit, Audit Management, and Audit Staffing. Contract Audit for the fiscal year ending 30 June 1957 audited costs in the total volume of $6,576,372,000. In addition, costs forming the basis of progress payments were reviewed. This action resulted

in a reduction of procurement costs of almost $150,000,000.

With the application of expenditure limitations upon the funds made available to the military departments, the requirements of financial management have increased extensively. Budgeting can no longer be formulated in terms of the ultimate ends to be sought, but of the particular means by which these ends will be obtained. This will require the anticipation of action which can only occur in many cases years beyond the period of which the immediate budget action is taken. When the realization of the end depends upon the imaginative and creative genius of scientists seeking to bring out the items sought to be produced or procured, the task of financial administration within such variables becomes most difficult. The establishment of a cash flow must be related to the statistics of past operations. In the area of pay and allowances, personal services and the procurement of common items, this is relatively not difficult. In the area of procurement of the instruments of defense for tomorrow, this has proved to be most difficult. Yet, this is the job that faces the comptrollers of the military departments. This is a job they must perform well if the economic stability of the country is to be maintained.

CURRENT ASPECTS OF ARMY COMPTROLLERSHIP

Lieut. General Wm. S. Lawton
Comptroller of The Army

I am grateful for this opportunity to acknowledge the First National Convention of the American Society of Military Comptrollers and to contribute to the Society's Journal.

In the first issue of this Journal, the Army's broad programs for improving financial management were described by the Assistant Secretary of the Army for Financial Management and by my predecessor, Lieutenant General Laurin L. Williams. It would perhaps be appropriate for me, at this time, to provide what might be called a status report — to tell you of our current accomplishments in carrying out those programs.

Progress in the past 12 months has brought the Army much closer to the objective of cost of performance budget. It is anticipated that the Army will be able to give the Congress its FY 1960 requirements on a cost-of-performance basis under its Operation and Maintenance, Army Appropriation.

The several years' work toward this end necessarily has gone beyond the pursuit of a cost-of-performance budget solely. It has required, and resulted in, the development of numerous systems improving all the Army's management's processes; and certain new procedures serve not only financial needs but as instruments of operational management as well.

Command Management System

The most significant accomplishment toward the cost-of-performance budget during the past year was the extension throughout all Army areas of the United States and oversea commands of the Army Command Management System (ACMS).

ACMS integrates into one over-all system the processes of programming Army activities, budgeting, accounting, performance analysis and manpower control. It provides a simplified method of fund control and a means of controlling operations in terms of workload performance and cost. The system therefore is a management tool of command at nearly all levels.

During fiscal year 1957, the establishment of ACMS in nearly all Army installations in the United States, Hawaii and Alaska had the effect of tightening management and accounting procedures in several hundred installations, including training centers, depots, laboratories, personnel processing centers, supply agencies, hospitals and production facilities. Pilot operations were installed in the Army's commands in Europe and Japan, where the system will become operational on 1 January 1958.

The two main aspects of Army management supporting ACMS, and integrated by ACMS, are the Program System and the Financial Management Plan, which themselves were improved during the year.

The Program System is a management device by which the Army plans its work, controls its activities and then reviews and analyzes progress to determine if the goals planned have been met. Important for cost-based budget purposes, the system provides a projection of workloads and costs on a continuing basis in the fiscal cycle. For several years the Army has employed 16 Primary Programs. During the past year the system was revised. It now provides for five Control Programs which constitute a five-way division of the peacetime missions of the Army and over a period of five years. These five Control Programs thus constitute a base from which guidance is derived by the Army's field activities, with the dominant feature being that field operations will be based directly on appropriations as they appear in the Army budget — a principal requirement of the cost-of-performance budget. They will become fully effective in fiscal year 1959.

The Financial Management Plan has established the various financial and accounting controls prerequisite to a cost of performance budget. Its principal components are: Appropriation and Revenue Accounting; Financial Property Accounting; Integrated Accounting; Stock Funds; Industrial Funds; Consumer Funding; and Internal Audit. More than 400 comptroller offices have been set up in the Army since the program started, and 267 Finance and Accounting Offices have been established to feed reports to 22 Headquarters Offices which then report to the Department of the Army. The latter was accomplished under Integrated Accounting, work on which was completed during the past year.

Also during FY 1957, the total number of Army activities brought under the Industrial Fund - a system of working capital or revolving funds - rose to 22 when the Army Pictorial Center and the Aberdeen Proving Grounds were added.

Management Structure

In Addition to the Program System and the Financial Management Plan, a third integral

part of ACMS is the Army Management Structure. It provides a single uniform classification of the Army's non-tactical activities and thus is the framework around which ACMS integrates programming, budgeting, and accounting leading toward the cost-based budget. One aspect of the Structure which helps to effect this is a uniform listing of activities which standardize terminology, definitions and activity inter-relationships. This common structure of activities relates manpower and financial resources to scheduled and accomplished workloads. Thus, over-all measurement and control factors run with clearer identification from the appropriation step by Congress through the programming, budgeting and accounting machinery of Army commands to action in the field; and inversely, activities in the field — based directly on appropriations — are reflected back for the type of cost of performance budget presentation Congress wishes.

Appropriation Structure

As a part of this effort, it has been necessary to revise the structure of certain of the Army's annual appropriations. These are: Military Personnel; Operation and Maintenance; Procurement and Production; Research and Development; National Guard; Reserve Personnel; Military Construction for Reserve Forces; Military Construction for the active Army; and Other Appropriations. These, in turn, are broken down into more specific major activities or Budget Programs such as Tactical Forces, Training Activities, Army Reserve and ROTC, etc. in the Operation and Maintenance Appropriation. To realign the over-all appropriation structure toward the cost budget, the Army is making Congress-approved revisions. During the past year, for example, the number of subdivisions within Operations and Maintenance Appropriation were reduced from 16 to 12 for fiscal year 1957 and a further reduction was made to 8 for fiscal year 1958.

Management Training

Changes in recent years in the Army's programming and management systems have intensified the need for management training of Army personnel, both military and civilian. This need was foreseen, and numerous management training courses are conducted regularly.

Last year, instruction in Army management of various types and degree was given to an over-all total of 12,000 officers in various Army-wide schools and courses. The amount of instruction ranged, according to the level of the students and the type of the schools, from a few hours to 150 hours.

Included in this over-all figure were 1,800 officers and key civilians who attended specialized management courses at the Command Management School, the Finance School and the Comptrollership course at Syracuse University.

The Command Management School, at Fort Belvoir, Virginia, provided a three-week course in management instruction for 514 higher-level civilian and military personnel during fiscal year 1957.

Comptrollership and Financial Management Courses, provided by the Finance School at Fort Benjamin Harrison, Indiana to fill special training needs, were taken by 1,255 officers and civilians in FY 1957. The courses given were:

- Military Comptrollership Course (6 weeks)
- Budget Course (5 weeks)
- Review and Anslysis Course (3 weeks)
- Financial Inventory Accounting and Stock Fund Course (3 weeks)
- Integrated Accounting Course (5 weeks)
- Introduction to Accounting I (Extension Course)
- Introduction to Accounting II (Extension Course)

Next year the school will offer four more extension courses in accounting, namely, Intermediate Accounting, Advanced Accounting, Auditing, and Cost Accounting. Arrangements have also been completed for presentation of four residence courses in accounting: Basic Accounting (4 weeks), Intermediate Accounting (4 weeks), Cost Accounting (4 weeks), and Advanced Accounting (5 weeks).

Thirty-one selected officers graduated from the regularly scheduled 14-month Army Comptrollership Course offered by Syracuse University, New York, during the year, received Master's Degree in Business Administration. Army officers attend management courses also at Harvard University and the University of Pittsburgh.

Management Benefits

In view of the costs necessary to compile world-wide figures on the number of management improvements and resulting benefits, only examples of such improvements are collected. During the past year 1,050 examples were compiled, with benefits totaling many millions of dollars.

Under the Management Improvement Program, commanders of nontactical units are re-

quired to develop and implement, wherever practicable, procedures to increase production, reduce paperwork, cut costs, save man-hours and material and to make certain that all personnel – military and civilian – realize their constant responsibilities to improve working methods and output.

Hundreds of improvements are developed and installed every quarter, ranging in benefits from a few hundred dollars to many million dollars. These new techniques and methods are distributed to all Army commands around the world. Ultimate benefits therefore are many times the original dollar-value estimate. These benefits are of vital assistance to the Army in carrying out with maximum effectiveness its assigned missions in the face of constantly increasing costs.

Work Simplification

During fiscal year 1957 a total of 11,951 supervisors were trained in work simplification; and installed improvements totaled 7,865 with benefits amounting to $9,031,203.

To the end of helping them improve their efficiency, many thousands of Army supervisors are trained every year in analytical tools of management such as Work Distribution Charts, Flow Process Charts, Layout Studies and Motion Economy.

With these techniques, supervisors analyze their work and seek reductions in lost motion, the elimination of duplication and the streamlining of paper work.

Over the past five years, on the average, 19,089 supervisors have been trained annually, with an average of 10,292 improvements installed every year. The average annual value of these improvements has been $11,282,040.

Automatic Data Processing

Six additional automatic data processing systems were installed during the year, bringing the total to ten. Nine are in supply accounting operations and one is in personnel accounting. Studies for additional uses of ADP systems were completed during the year, and during fiscal year 1958 new installations will include traffic management, financial accounting and an integrated supply and financial accounting operation in one command overseas. In addition, the Project MASS (Modern Army Supply System) will be streamlined with ADP system.

In recognition of the need for training in the highly technical field of computer installation and operation the Army plans to introduce ADPS courses in the Army Service Schools shortly.

For the immediate future, our efforts must be geared to the refinement of existing systems, the elimination, simplification, or mechanization of accounting detail, and encouraging proper management use of data generated by the Army Command Management System. Then, too, the big objective of actually presenting a cost of performance budget to the Congress is still before us. In view of current budgetary and expenditure limitations and the consequent personnel reductions, which are being experienced throughout the Department of Defense, the Army will necessarily limit initiation of new programs requiring additional manpower or over-burdening available resources.

FINANCIAL MANAGEMENT IN THE UNITED STATES MARINE CORPS

Brigadier General F. L. Wieseman
United States Marine Corps

On the occasion of the first national convention of the American Society of Military Comptrollers it is a pleasure to report on the progress made by the Marine Corps in our improvement in financial management. As the smallest of the four services and the one with the least dollars to spend, it is incumbent upon us to be the most frugal. It might appear that size would make our problems in this area simpler to solve; yet, in our relatively smaller size and our dependence upon the other armed forces for certain services and procurement there lie many real problems.

Comptrollership came to the Marine Corps from the same sources which gave it to the other services; legislation and directives from higher authority. Initially, we faced problems which, I believe, were common: lack of understanding, lack of trained personnel and lack of procedures. All of these wants have been attacked vigorously, and now, even though faced with a steady flow of changes which constantly filter down upon us, we feel that we are on a firm foundation.

General R. McC. Pate, Commandant of the Marine Corps, has given his whole-hearted support to our programs, and through his continuing interest in achieving the most fighting power for the least dollars, we feel that substantial progress has been made. Great changes have been made in our dollar systems, and a Marine Corps-wide awareness of the importance of financial management has resulted.

The Commandant of the Marine Corps is a direct subordinate of, and reports to, the Secretary of the Navy. For matters of finance, he, like the remainder of the Naval Establishment, operates in accordance with the principles and policies formulated by the Navy Comptroller, who is also the Assistant Secretary of the Navy for Financial Management. Therefore, the procedures and policies followed by the Marine Corps are identical with those followed elsewhere throughout the Navy Department, except where deviations are authorized in some instances to allow for the differences in organization and mission of the Marine Corps. The Marine Corps depends upon the Navy Comptroller for much direct support, prominent amongst which is the internal audit function which the Comptroller of the Navy performs for the entire Department of the Navy, including the Marine Corps without recourse to an intervening service level echelon.

To meet the requirements of financial management, the Marine Corps organized a separate Fiscal Division at Headquarters Marine Corps in 1953, and separated the duties of the Fiscal Director of the Marine Corps from those of the Quartermaster General by establishing those two offices as separate primary functions performed by two individuals instead of as concurrent functions of one as had been done previously. By the newly constituted functions of the office, the Fiscal Director was charged with the responsibility "for the formulation of fiscal policy and the fiscal administration in the Marine Corps to the end that fiscal action, policies, and procedures in the Marine Corps will be in conformity with the law, good business practice, and applicable policies, procedures, and regulations issued by higher authority".

The division has four branches: Budget, Accounting, Statistical Services, and Audit. The names are self-explanatory, and their functions are typical. It should be pointed out however that the Audit Branch performs only internal review and liaison with external audit agencies.

Probably the greatest change brought about by the implementation of Title IV of the National Security Act, as amended in 1949, has been the broadening of the base of financial management through the increase of the number of staff officers who participate in the management of appropriated funds administered by the Marine Corps. Virtually every principal staff officer participates annually in the creation of the Commandant's Financial Plan, and in making the inevitable modifications thereto. The Commandant is advised on the broad policies relating to the budget by a Budget Advisory Group which is composed of those heads of departments and divisions who are the sponsors of budget projects. It is significant that it is the policy for the project sponsor to be that staff officer who has the primary staff responsibility for the project, or function, for which the funds are intended. Thus, we have the situation where all concerned principal staff officers are brought together to generate advice to the Commandant; this advice being based on balanced staff action and not upon the ideas or efforts of a single man or division.

Our organization in the field follows the broad directives of the Commandant, but each commander is allowed the necessary latitude of decision in details of organization to permit his comptroller organization best to service the

requirements of his command. For example it is obvious that a Fleet Marine Force Headquarters with a function which is primarily combat could not profitably be restricted to the same organization for financial management as a supply depot. Within the freedom of organization allowed, specific functions were prescribed. These functions are budgeting, accounting and disbursing, and progress reporting and statistics.

It was recognized from the beginning that only the major commands had funds in amounts sufficient to justify formal comptroller organizations. It was also recognized that combat units below the level of Fleet Marine Force Headquarters should not be burdened with the details of financial management which would require a complex comptroller organization. Thus, at division level in the Fleet Marine Force, and at some of the smaller installations, only a fiscal officer is authorized to coordinate internal fund distribution and to centralize appropriation accounting. This is not intended to imply that financial management is minimized in these commands. It was simply the result of the determination that combatant units should be freed from as much administrative detail as is feasible by higher headquarters, and when this is done there is no need for a separate staff organization for financial management. To fill the void, the Commandant directed that the commanding officer would himself perform the residual functions of comptroller. Our small posts and stations operate under an open allotment within levels of funds prescribed by the Commandant of the Marine Corps, and the accounting is done for them at Headquarters Marine Corps.

It is the general policy of the Commandant that maximum authority be delegated to his commanders in the field. The area of finance is no exception. While the budget is prepared at Headquarters Marine Corps, it is based upon estimates prepared by the major field commanders from guidelines furnished by the Commandant. When funds are apportioned to the Marine Corps, those required for field use are allotted to the field commanders on the basis of a single allotment for each appropriation subhead. Within the minimal limitations, and controls exercised by the Commandant to insure that good management practices are carried out and that a uniform standard of living exists throughout the Corps, commanders are free to obligate their funds as necessary in carrying out the missions which have been assigned them. The Fiscal Director monitors the various programs in order to insure that the Commandant is well-informed on the financial status of the Marine Corps and that funding alterations are kept in consonance with any differences in planned and actual program execution.

Some of the continuing problems with which we are faced are: the education of both military and civilian personnel in the broad field of financial management; ever-increasing demands for skill, such as accounting (this problem is most acute in the more isolated of our stations); the frequently amended legislation which we must respond to; and the universal problem of how to get enough dollars to discharge all of our multitudinous missions. In this period of rising and added costs with a quantitative or qualitative decrease in available funds, our problems, like those of our sister services, become more and more acute. We believe that the solution to the problem, to a point, lies in the area of ever-increasing efficiency and reduction of nonessential functions to the absolute; but a reasonable, logical, and candid evaluation of this aspect must recognize that this process ultimately reduces the performance achieved.

We believe that we have established a system of financial management which is tailored to our needs and organization; which is responsive to changing conditions; which puts financial responsibility squarely upon the shoulders of those who should bear it — the commanders; and which enables us to get the highest return from the funds which become available to us for obligation upon conclusion of the appropriation, apportionment, and allocation process. We believe, further, that we have provided our commanders with the assistance of balanced staff action so that they may be kept apprised of the implications, dollar-wise, of all their decisions.

There are still improvements and modifications to be made, and it would be foolish to state that we are not facing major problems in the area of financial management; yet, great progress has been made. Not the least of this progress is an increased awareness on the part of all hands of the importance of economy and efficiency. We count as our greatest asset the determination of the entire Corps to get the most combat out of every dollar appropriated to us; for, it is for this reason that we exist - to be ready to fight wherever and whenever we are needed.

CONSTRUCTUVE ASPECTS OF GENERAL ACCOUNTING OFFICE REPORTING

Lawrence J. Powers, Director
Defense Accounting and Auditing Division
General Accounting Office

The General Accounting Office has a common interest with Defense management in promoting greater efficiency and economy by improving management and operating controls. Our interest rests on our responsibility for evaluating and reporting to the Congress as well as to management. This community of interest extends to all phases of management's responsibility for supervising and controlling operations.

Management, of course, is directly responsible for carrying out the programs authorized by the Congress. Our audits, examinations, and reviews are designed to appraise the effectiveness and efficiency of operations on an independent and objective basis. Since our reporting responsibilities run directly to the Congress, as well as to management, our reports should be especially valuable to management.

To improve, it is first necessary to identify areas requiring improvement or correction. All phases of operations must be critically analyzed and evaluated. To be worthwhile, such evaluations must be constructive. Obviously any concept of auditing in limited terms of legality and fiscal propriety would be totally inadequate. Our approach, therefore, is to make surveys, reviews and analyses and to adapt different types of audits according to the significant management and operational features.

There is a single basic theme; however, in all of these technique variations; that is, to evaluate in terms that can be crystallized in the form of constructive recommendations and suggestions. The Comptroller General's policy is to emphasize the constructive aspects of our reporting to the Congress and to management.

We prepare reports for transmission to the Congress under specific provisions of law or if they contain (a) recommendations for legislative action, or (b) information of interest, concern, or use to the Congress or its committees in their work relating to the agency under audit. In the defense area, however, even specific programs are very large and complex. Piecemeal reporting on audits of individual operations is not always an effective, or even adequate, means of reflecting significant features of such programs. Therefore, to properly discharge our reporting responsibilities to the Congress, our general approach is to develop and report on complete audit appraisals of entire functional segments of major command responsibilities for departmental activities.

Under this approach, our audits and reviews at the various command and management levels are designed to complement the findings and actions taken in related logistical, technical, and financial management areas. They thus provide a basis for department-wide evaluations of specific programs. This approach also permits us to advise the Congress of the actions which have been taken regarding any problems disclosed by the audits. These include solutions proposed or under development by management which are of primary interest and concern to the Congress.

Our reports on the military assistance program are a good example of this reporting approach. We reviewed and tested activities related to the program at the Department of Defense level and at headquarters and field levels in the military departments. We visited nine of the foreign areas involved. Our findings, conclusions and recommendations were submitted to the Congress and to top management in the form of an over-all report which was supported by individual segment reports. The latter also were submitted to other appropriate management levels.

The emphasis on constructive aspects in our audit reporting also has a number of other important implications from the standpoint of management. It means that we report on those matters which are not effectively administered under prescribed policies and procedures. It means, as well, that we report on those matters which demonstrate the need for reconsideration or revision of such policies consistent with the intent and purpose of the programs authorized by the Congress. It puts high priority on timely reporting directly to the point of responsibility for action. And it places a premium on providing higher management levels with information which is significant in terms of the proper discharge of their responsibilities.

Our practice is to bring our findings and suggested solutions directly to the attention of responsible operating commanders or officials as soon as they are crystallized and to discuss them on the spot without awaiting completion of the audit. This is done so that any necessary remedial action can be taken promptly. We are

careful, however, to limit our suggestions for local action to matters that are within the jurisdiction and capabilities of the local commanders or officials. Matters having policy or other wider implications are handled only at the appropriate levels.

This direct action approach not only speeds local corrective action where authorized; it also stimulates consideration, through normal management channels, of problems which may not have been previously recognized. In our opinion this method of dealing with problem areas as they arise has made important contributions to improved efficiency and economy in the operations of the defense establishment.

Our audit of materiel requirements in one of the military departments is a good example of these features of our reporting approach. Agency officials took immediate corrective action on a number of our recommendations which were brought to their attention during the course of the audit. Many other aspects of our recommendations also are being implemented by the military department and we have endorsed certain of its plans which grew out of the audit findings.

Higher levels of management have a vital interest in our independent appraisal of operations. Consequently we report to them all of our significant findings, even though we recognize that they may be aware of some of the conditions reported and may have initiated or devoted considerable effort toward solutions. Our reports, to be completely objective, must give full recognition to these efforts and our recommendations are designed to assist in the accomplishment of the necessary improvements. A case in point is the efforts which have been made to improve the programing of military assistance. Another is the management control system work which we have noted in connection with our audit and review of aircraft and engine overhaul and repair activities in one of the military departments.

Sometimes apparently isolated problems disclosed by our audits and reviews are important to management even though not significant in terms of congressional interest. The condition may exist throughout other activities which we have not audited. We report all such findings to management to afford it an opportunity of fully discharging its responsibilities.

Copies of all of our audit reports concerning defense activities are furnished the Department of Defense. This is done to enable those officials to discharge their general management responsibilities in regard to supervising the manner in which policies and directives are being carried out. Where the matters reported on have defense-wide implications, this permits realization of the full value of the findings and recommendations throughout the defense establishment.

Our audit and reporting approach of department-wide evaluation of specific programs which, as stated above, is our general basis for reporting to the Congress, has equal significance to top management in the military departments. It provides them with comprehensive evaluation, on a completely independent, objective basis. This would be extremely difficult, if not impossible, to achieve in any other way. For these reasons it should be indispensable. We believe that this approach provides our most effective means of contributing to our mutual objective of improving management and operating controls.

Our over-all appraisals of functional programs are submitted to appropriate management levels. They are supported by individual operating segment reports, and by on-the-spot access to our findings during the course of the audits. This practice is designed to assure full recognition of the primary management responsibilities for executing the programs involved, and for using all available means of making improvements. On the other hand, where our findings do not warrant reporting to higher management levels and adequate corrective actions have been taken locally, we merely advise top management of these facts.

It has been a relatively short time since we have accelerated our comprehensive audit and systems review and evaluation programs, and the reporting of their results in accordance with the Comptroller General's policy of emphasizing the constructive aspects of audit reporting. This period, however, has seen very marked improvement in the degree of mutual understanding of management and command problems on our part, and of the values of our audit reporting approach on the part of management. We believe that continued improvement in the means of communication between responsible commanders and management and the auditors will lead to solution of the remaining problems in connection with our reports. Departmental comptroller activities which share with us the objective of improving management and operating controls so as to promote greater efficiency and economy in the defense establishment will continue to play a vital role in this improvement.

THE CHALLENGE FACED BY OPERATIONS STATISTICS

Major Robert M. Dean
Chief, Operations Capabilities Branch
Operations Statistics Division
Director of Statistical Services
Headquarters, United States Air Force

A modern military force, paradoxically, is of greatest value when not being used to produce the end-product for which it is designed. This is as an effective deterrent force. An essential element of a deterrent force is the ability to control it under all conditions.

The Statistical Services organization of the Comptroller of the Air Force, is usually associated with its industrial type reporting system. However, important support is also provided to the combat control system.

Support of this nature centers in the field of Operations Statistics, which is the systematic collection and processing of that data necessary for the employment, control, and immediate support of weapon systems. This may include data from any functional area, depending upon the situation existing at any given moment, but generally concerns operational readiness, activity, and location information. Just as intelligence present the enemy situation, Operations Statistics assists in reporting the status of our own forces.

The capabilities of modern and projected weapon systems impose challenging requirements for a control apparatus capable of achieving maximum effectiveness from the delivery vehicles. Global range at sonic speeds, and nuclear warheads produce a capability to compress decisive combat action into a brief time period. The control problem is intensified by the nature of the dynamic changes in the systems themselves. In air weapon systems for example, there are three clearly identifiable stages of progression:

a. Manned delivery vehicles.
b. Combination manned delivery vehicles and unmanned missiles.
c. Unmanned missiles.

Combat Reporting is an Element of the Control System

We are presently entering area "b" with resulting pressure to develop and operate reporting systems capable of supporting both manned and unmanned delivery vehicles concurrently. As we progress towards the area of unmanned delivery vehicles only, we are faced with the requirement of constantly decreasing the allowable reaction time in the control process. This necessarily reduces the allowable time in which to collect and process data, to the nearest that can be obtained to an instantaneous process. Reaction time is the elapsed time necessary for this cycle of events to take place in the control system as a whole:

1. Detection of the situation requiring command decision.
2. Awareness at the decision making level of the necessity of making a decision.
3. Evaluation of the data presented.
4. Making the decision.
5. Transmitting the resulting orders.
6. Implementing the orders.

These are the steps in maintaining operational control. The reporting and processing of data is the life-blood of the control system. Operations Statistics' major role at H hour is to support the operational control system by assisting in the reporting and processing of operational data. To provide a continuous high state of readiness of the combat reporting element, extensive effort is undertaken in planning and training prior to H hour.

The Nature of Decision Making at Highest Command Levels

A premium goes to that force which can effectively maintain operational control at the highest levels of its command structure. This makes more effective use of total forces possible. The ability to reorganize the total force in the wake of the initial exchange, re-appraise the new situation, and launch remaining effort to points where it will be most effective, may be decisive.

In designing a strategic reporting system several new factors must be taken into consideration. For example, decisions formerly regarded as tactical in nature, such as the launching of individual strikes, may now be considered at high strategic levels, because of the huge contribution to total decisiveness of individual strikes. Obviously, a reporting system must be devised to provide the decision making levels with the information upon which to base these decisions.

The compression in time of the decisive phase, requires compression of strategic decision making. Consider that, on a comparable basis, the magnitude of strategic decisions in the years of World War II (invasion of North Africa, Normandy and the Pacific, for example) may have to be achieved in a matter of hours and minutes. This means more facts must be presented in a shorter time and in readily usable form.

The first decisions that must be made will be "if", "when" and "how" to launch our initial strikes. Emphasis of "how" will be on which advanced plan to initiate.

The next phase of decision making will probably result from "battle following" or progress analysis. This consists of comparing the plan selected, against reported results and taking corrective action as significant deviations occur.

Subsequent decisions might be concerned with regrouping for succeeding strikes, and allocating the remaining resources in terms of available delivery vehicles and weapons to the most remunerative remaining targets. This requires precise and timely knowledge of what we have done to the enemy and exactly what we have remaining to fight with.

Recognition of the moment our objective is achieved, so that the decision to halt our attack can be given, may be the most important decision of all. Certainly it will be one of the most difficult, and emphasizes the critical requirement for timely reporting.

An in-being reporting system which can provide the information necessary for the above type of decision-making is not only an essential element of the force after H hour, but contributes immeasurably to it being a deterrent force in the first place.

A Possible Approach to an Effective Strategic Control System

The major functions of a control system are to:

1. Collect status and activity data on a high speed, high frequency basis.
2. Move the data, or suitable abstractions of it, rapidly to the points of use.
3. Process the data to put it in usable form.
4. Compare data against planned goals of status and activity.
5. Determine deficiencies.
6. Determine possible courses of corrective action.
7. Select the best course of action to correct each deficiency.
8. Transmit the decision to the implementor of the decision.

The above actions are continuous, of high frequency, and often overlapping. It is significant, that of these 8 steps, humans may be assisted in all of them by electronic data processing and transmission equipment. In fact, the use of this type of equipment offers the best hope of designing a control system which will keep pace with the information requirements generated by the capabilities of modern weapon systems.

The following outline briefly describes the requirements of a strategic control system using EDP equipment and some possible applications of it:

1. Establish "in-being" communications, electronic data transmission, processing, and presentation equipment, operated by trained data handling personnel and organized as an integrated system.

2. During peacetime store current status, inventory, and location data on electronic devices for immediate processing by electronic equipment. This is comparable to stockpiling "hardware" and supplies on bases for wartime use. In short, this is stockpiling of operational data, ready for immediate use, as a point of departure for maintaining a current inventory position by continuous subtraction of known losses and consumption.

3. Also store electronically, a great number of alternate plans, each based on different assumptions and each tested by electronic war gaming best to meet a given set of assumptions. These would be used for electronic selection of the initial plan to be used, by comparison of the actual situation existing at the time of the "go" decision with assumptions upon which each plan is based. It can also be used for electronic analysis of progress against the plan and identification of problem areas as they develop. This may conceivably be used in conjunction with the input data on actual results, to determine by the gaming theory, the mathematically best of several alternate solutions for a given problem as identified above.

4. Target "significance" data may also be electronically stored so that the military, economic, and social effects of our strikes can be computed as the air battle progresses.

5. Maintain communications in depth and independent of land lines which pass through target areas which may be tempting to the enemy.

6. Provide sheltered command posts.

Organizational Implications of an Effective Control System

"Layering" of the number of levels of operational control may have to be limited to

reduce the friction in the system induced by each organization through which data and instructions must pass. This, of course, may require a complete reevaluation of the concept of command integrity. The compelling urgency to reduce reaction time may conceivably require the most junior organizational element to report directly to the top control authority, with intermediate authority being apprised of the situation from the "top-down".

The necessity to plan for the worse possible contingency, that is, in case of the control system-loss of communications - suggests a cellular type of organization. Each component is prepared to take over operational control of its units the moment contact is lost with the next higher echelon. Therefore, planning should take place for both ends of the spectrum — full flow of operational data, in which case a centralized control plan should be in existence permitting the force commander to make the greatest possible use of his forces, and a decentralized plan in event of no communications.

Role of Statistical Services

Statistical Services has been closely identified with the role of combat or operational reporting since the early days of Korea. A specialization area of the Statistical Services system is that of Operations. Personnel assigned to Operations Statistics are not only trained in the collection, movement, and processing of data but also possess backgrounds in the operational area. This, combined with technical know-how in data processing, places the Statistical Services officer in a unique position to support his commander and operations staff in this field.

A sense of urgency exists to maintain control systems capable of keeping pace with our new weapon systems. This is the challenge facing Operations Statistics.

THE NAVY MANAGEMENT OFFICE

Robert F. Graham
Editor, NAVY MANAGEMENT REVIEW

The most dynamic and effective organization is created only when the staff has been established in accordance with the needs of management. This fact became the base on which the Navy Management Office was established in August of 1955.

Prior to that time, there were two uncoordinated management staffs at the Secretarial level, namely, the Navy Management Staff and the Office Methods Division of the Administrative Office, Executive Office of the Secretary. While the former group was principally concerned with organizational matters and 'special' assignments, the predominant responsibility of the Office Methods Division was the development and sponsorship of effective, Navy-wide business administration practices. Each staff, however, resembled the other in one important aspect. Each had set its sights on a single goal — better management in Navy.

The problems of management soon came to be realized as total problems. It was recognized that management problems could no longer be studied independently of one another. The relationship of organization to methods to data needs was now the vital fact to be considered.

Thus, the two staffs were combined and additional staff responsibilities were added, and the NAVY MANAGEMENT OFFICE was created to provide a full and well-rounded service to line management. It was also intended that this staff be flexible enough to adjust its emphasis to the needs of tomorrow while meeting management's needs of today.

With the consolidation of the two staffs into one reporting to the Administrative Assistant to the Secretary, the Navy had established, for the first time, a management staff whose concerted effort and paramount responsibility would be — better management throughout the Navy and the Marine Corps.

Functional Responsibilities

In carrying out this comprehensive assignment, the Navy Management Office operates within broad functional areas. Briefly summarized into general statements, they are:

1. Plans, develops, and coordinates management improvement efforts to bring about improved organization and methods and to increase the efficiency of Navy's business operations.

2. Furnishes staff support and assistance to the Secretary of the Navy and his Civilian Executive Assistants in discharging their responsibilities for "business administration" of the Department of the Navy.

3. Collaborates with and assists the Chief of Naval Operations, the Commandant of the Marine Corps and the Naval Technical Assistants (Bureau and Office Chiefs) in evaluating and improving their organizations, industrial and office processes and general management efficiency.

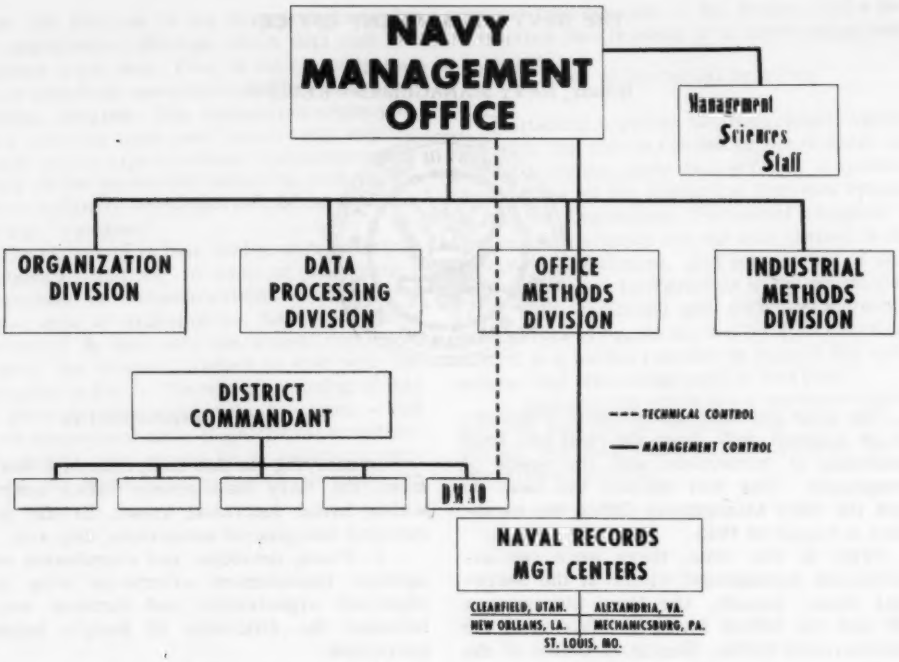
4. Sponsors and coordinates Navy-wide management improvement programs. Develops techniques to improve common problem areas, and assists bureaus and offices in their application.

5. Conducts surveys of Navy-wide systems, organization, methods and procedures, or those which cross bureau and office lines. Conducts studies of specific management problems at the request of bureaus and offices.

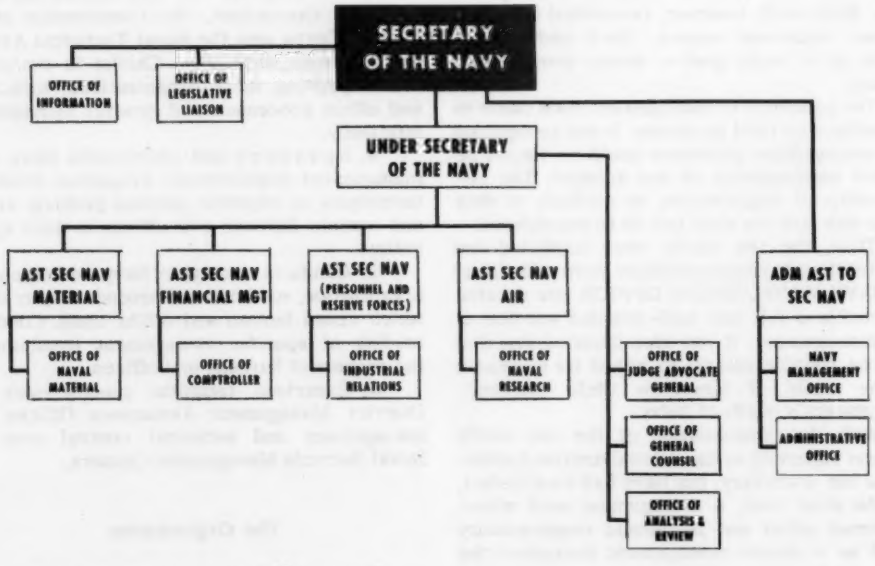
6. Exercises technical control over the District Management Assistance Offices and management and technical control over the Naval Records Management Centers.

The Organization

Currently, four divisions and a separate



THE SECRETARIAT AND THEIR MAJOR STAFF OFFICES


SECRETARY OF THE NAVY
OFFICE OF INFORMATION
OFFICE OF LEGISLATIVE LIAISON
UNDER SECRETARY OF THE NAVY
AST SEC NAV MATERIAL
OFFICE OF NAVAL MATERIAL
AST SEC NAV FINANCIAL MGT
OFFICE OF COMPTROLLER
AST SEC NAV (PERSONNEL AND RESERVE FORCES)
OFFICE OF INDUSTRIAL RELATIONS
AST SEC NAV AIR
OFFICE OF NAVAL RESEARCH
OFFICE OF JUDGE ADVOCATE GENERAL
OFFICE OF GENERAL COUNSEL
OFFICE OF ANALYSIS & REVIEW
ADM AST TO SEC NAV
NAVY MANAGEMENT OFFICE
ADMINISTRATIVE OFFICE

management sciences group make up the structural framework of the Navy Management Office. They are the Office Methods, Organization Planning and Review, Industrial Methods, and Data Processing Systems Divisions.

Specifically –

Office Methods Division –

Coordinates and exercises technical control over Navy's Paperwork Management Program and other business administration programs and techniques designed to assist the Naval Establishment in achieving maximum results with a minimum expenditure of manpower and money. Conducts management surveys which cross bureau lines or are Navy-wide in scope.

Organization, Planning and Review Division-Performs staff work in support of the Civilian Executive Assistants for the organization of the Department of the Navy; maintains the organization of the Department under continuous review; handles special assignments and performs studies of special interest to one or more of the Civilian Executive Assistants which do not fall within the scope of another division of the Office.

Industrial Methods Division –

The efforts of this division encompass numerous areas in our shipbuilding, aircraft overhaul and repair, ammunition handling and supply operations where we have pioneered in work and production management improvement. The Navy's statistical performance and engineered standards efforts, for example, indicate the progressive use of modern industrial management techniques by this division.

Data Processing Systems Division –

This Division develops Navy-wide policies and procedures to assure early, complete and appropriate utilization of modern data processing equipment and techniques. In addition, the Division develops long-range plans, principles and objectives for a Navy-wide Integrated Management Information System including the communications aspects and is vitally concerned with new concepts in the area of management information by electronics.

Management Sciences Staff –

An example of meeting tomorrow's needs is the Management Sciences Staff which was created in late 1956 to sponsor both "basic" and "applied" research to the solution of management problems. It is hoped that Navy managers will use the management sciences to develop model approaches to management problems in much the same way as into physical problems. By so doing, they will be able to develop a more scientific means for measuring the effectiveness of different types of efforts, which in turn will provide more intelligent executive action.

Philosophy of Better Management

The Navy considers that there are four large areas of management improvement need which transcend functional and organizational lines. These areas require our continuing management improvement attention and are:

1. Office Methods and Systems
2. Organizational Analysis
3. Industrial Methods, and
4. Mechanization of Business Systems

(It must be stated at this point that management improvement effort not only stems from the Navy Management Office but also from other staff offices in the functional fields of finance, material, personnel, and facilities.)

The Three-fold Approach

We feel that our needs and problems in the four management areas are best served by a three-fold approach which embraces, ONE - the formal management programs, TWO - individual management surveys and studies, and THREE - do it yourself. We feel that Navy's needs are best fulfilled by all three approaches rather than concentration on a single endeavor.

The FIRST approach – Paperwork Management is an example of one of Navy's formal management programs. Its purpose is to bring about maximum efficiency in paperwork operations at a minimum cost. This program provides managers with the means to control paperwork primarily through the application of several techniques in managing our Forms and Reports, improving our Records Systems, streamlining correspondence practices, providing orderly Disposition of Records and in developing Integrated Paperwork Systems.

The SECOND approach – the "Management Survey" approach places concentrated effort on one problem where the "before" and "after" conditions can usually be portrayed in dynamic fashion. Benefits are usually tangible and Navy managers can readily see whether they should or should not make a change.

The THIRD approach – the management improvement actions made by any and all individuals. DO IT YOURSELF - describes the line manager's responsibility for making

improvements in his own operations. This is the most important element of all since Navy subscribes to the principle that management improvement is a line responsibility. The staff should devise methods for making improvements and provide the line manager with the assistance and training necessary for their implementation.

The Future

We are continually looking for ways to change our emphasis, adjust our sights and use new management techniques to their fullest potential. With respect to tomorrow - next year - the years ahead, the Navy Management Office is projecting its efforts on a plan that, for want of a better name, can be titled, "FUTURISTIC".

Embodied in it are three guideposts to keep us on course. These three markers or elements on which we place subsequent emphasis are: Challenge the Traditional, Explore the Impossible and Anticipate the Future.

In Conclusion

Space does not permit the elaboration of our many other active programs, survey actions, electronic data processing evaluations, industrial engineering undertakings, or training and consultant demands. This concise presentation merely sketches for the reader a picture of what we are - what we are doing - and what we look forward to.

The Navy Management Office is in a unique position to provide maximum service to line management. That is our purpose. That we must always do.

ARMY MANAGEMENT STRUCTURE

A Framework for Army Management

Lt. Col. James M. Cochran
U. S. Army

The Army Management Structure, currently being developed to provide a hub or fulcrum for the Army Management process, represents the latest in Army thinking as a management device to interrelate and correlate such major facets of the management complex as programming, budgeting, accounting, manpower reporting and control, program performance reporting, program cost recording and reporting, and program review and analysis. It is not a management system per se. Rather, it is an essential element of a comprehensive management system and specifically provides a framework or matrix that will serve as the basis for the direct correlation of resources with the job to be done and for coordinate consideration and use of the many existing tools of management within a common frame of reference.

Following World War I, Government concern over improvement of Federal management resulted in a series of Congressional actions starting with the Budget and Accounting Act of 1921 and followed by other budget and accounting legislation, the National Security Act of 1947, the National Security Act amendments of 1949 that resulted primarily from the work of the first Hoover Commission, and other legislation. Among the latest of many Congressional actions is Public Law 863 passed by the 84th Congress.

As a part of the general movement for improvement of management in the Federal Government, two of the current day Army management devices were initiated in the early 1950's, the Army Program System in 1950 and the Financial Management Plan in 1951. These two devices were necessarily related at the outset with the budget process and in 1954 gave rise to what was termed IPBA, meaning Integrated Programming, Budgeting and Accounting. IPBA later was called the Army Command Management System with its several subdivisions such as the Class I Command Management System and the Depot Command Management System.

Because of the recognized need for interrelating programming, budgeting, accounting and manpower control by means of some control device, work was started in 1952 on the Department of the Army Integrated Structure, a provisional version of which was published in 1955. This structure, which integrated the budget structure and the then current sixteen Primary Programs of the Army by means of a coding system, was issued with a stated purpose of providing standard terminology, definitions and work units for programming, budgeting, accounting and manpower control. Unfortunately, even the limited concept of this structure was too new to gain full Army staff approval and it had to be issued for optional rather than mandatory use. Further, the Integrated Structure was in part obsolescent at the time of issuance because of independent changes in the Primary Program Structure and in the Army Budget Structure.

By the end of 1955, the Army could show many management innovations and many changes in management methods and techniques, but unfortunately, the budget structure and the programming structure were sufficiently diverse so that it still was not possible to effect full correlation of the many and varied facets of the Army's management complex as a single coordinated system. Many of the new tools of financial management were in operation. The several revolving funds were in operation. The Stock Fund was well on the way to placing non-capital supplies and equipment management on a consumer funding basis. Many commercial type activities had been brought under the Industrial Fund. A single accrual type accounting system was being placed in use as a major element of the Army Command Management System. After many months of effort, the realignment of the Army's major operating appropriation (Operation and Maintenance, Army) to support program performance budgeting on a cost basis was nearing completion. Unfortunately, the programming system with its sixteen Primary Programs was still independent of the budget system. The manpower control system had to identify manpower separately with the programming structure and with the budget structure, as well as with the command organization. The identification and assignment of resources with each task assigned to a command was still not possible. There had been no reduction in the data maintenance and reporting load in field commands. The principles of decentralized management and management by exception were still watchwords. They had not yet been reduced to fact.

In 1956 a functionally realigned Operation and Maintenance Appropriation became both a fact and a milestone in the course of improved Army management. It paved the way for a major revision of the Army's programming system and

set the stage for the development of the Army Management Structure. These developments of themselves were not expected to result in an automatic reduction in data maintenance and reporting by field echelons. Nor were they expected to establish the principles of decentralized management and management by exception as fact. They were expected, however, to provide for the identification and assignment of resources with assigned tasks. This was a major step forward. Other steps would follow as the many facets of the Army's management complex took their place in a single coordinated system.

In June of 1956 the Comptroller of the Army established a Project Group for the purpose of revising the Department of the Army Integrated Structure to bring it up to date, and coincident therewith to provide a uniform structure for the operation of Class I Installations under the Army Command Management System. The Project Group drew up a list of operating guidelines, including the specification of the budget structure as the governing structure. A new title, Army Management Structure, which better connoted the expanded purpose and concept of the new structure was adopted.

In the meantime, as a result of other staff action, a Vice Chief of Staff established Task Force began operations in August of 1956 to develop an Army Program System directly related to the Army Budget. As a result of the work of this group, an Army Regulation establishing a revised programming system for fiscal year 1959 was issued as of 31 December 1956.

The revised programming system provides for five Control Programs. They constitute a five-way compartmentalization of planning for the execution of the peace-time mission of the Army and cover a period of five years. The target fiscal year is the middle year of this five year planning period. In effect, therefore, the Control Programs constitute a five year Department of the Army Headquarters planning base from which guidance is extracted and issued to the field echelons for the conduct of non-tactical operations for the Target Year.

The dominant feature of this revised program system is the fact that the scheduling and execution of field operations will be accomplished on coincident terms with budgeting and funding for the execution of field operations. Guidance for the Target Year of the Control Programs is developed as Program and Budget Guidance for issuance to individual field commands. Army objectives for the target fiscal year and budget (dollar) guidance to support these objectives are developed together and expressed in the same frame of reference, i.e., the Army Management Structure. In like manner, Target Year guidance is issued through successive echelons and each echelon of command establishes its own Operating Program using the same frame of reference. Operating Programs establish budgetary requirements.

The revised Army Program System utilizes the Army Management Structure. Similarly, the Departmental Budget Structure of the Army is identical in content with the comparable level of detail in the Army Management Structure. Maximum effectiveness in the control and utilization of manpower requires such a single structure. The Army Management Structure must therefore exist as the means of control over the budget structure and over the format for field programming, and must provide the basis for manpower reporting and control. Appropriation structure changes must be staffed and reflected as Army Management Structure changes that will control the field programming structure. In like manner, field program structure changes cannot be independently arrived at. In considering these interactions, cognizance must be taken of the fact that the programming system is internal within the Army while the structures of the appropriations and the budget system are subject to the influences of higher authority, including the Office of The President and The Congress. It must also be recognized that the budget is primarily a financial device and is not fully and directly usable for programming.

In its present stage of development, the Army Management Structure exists in two forms, the published Interim Management Structure covering the Operation and Maintenance Appropriation area and the broader Army Management Structure currently being developed for coincidental application with the revised Army Program System for fiscal year 1959. The recording of manpower, performance and cost data in accordance with designated levels in the Interim Structure started 1 July 1957.

The Army Management Structure is designed to provide a uniform listing of activities of the Army for programming; for budgeting; for reporting of accomplishment against that which is scheduled; for reporting of manpower utilization; for the recording and reporting of the interrelationship of personnel, material resources and money in accomplishing the job to be done; and for reviewing what has been done to determine how to better use resources in the future. Further, it provides the basis for recording cost data and related job accomplishment in support of Department of the Army cost-based budget submissions.

In basic format, the Structure consists of

an appendix for each Army appropriation, except the Operation and Maintenance Appropriation for which each mission budget program is an appendix. Additionally, a separate appendix identifies "Operation and Maintenance of Facilities". Each appendix is termed a Major Activity. The Operation and Maintenance of Facilities Major Activity is station or installation type service support common to all installations. This Major Activity represents the Department of the Army identified indirect overhead that is distributable to mission activities or groups of activities in accordance with appropriate distribution formula.

Activities are derived by considering the several appropriations as representing the total activity of the Army which is administered through the non-tactical or management side of the Army. The appropriations are generally considered as "Operating" if they finance the day-to-day operating costs of running the Army; as "Capital" if they finance the acquisition of major equipment items and fixed assets, including Research and Development; and as "Working Capital Funds", which are self-sustaining. The Military Personnel Appropriation has an anomalous status in many respects, and definitely so in an accounting sense. The appropriations are successively subdivided to the extent necessary to meet Department of the Army Headquarters requirements. All subdivisions are termed activities.

Each appendix is composed of three sections. Section I lists activities and provides a code identification for each activity. It also identifies the activities for which manpower strength data, program cost data and program performance data will be maintained. The identification of the activities for which program performance data are to be maintained establishes the level of program scheduling to meet Department of the Army requirements for program performance data maintenance. Budgetary levels are also identified, although the detail of budgetary support data is left for separate identification. Section II defines each activity and identifies a Performance Factor where possible. Section III defines the Performance Factors.

Performance Factors have been identified with each activity to the extent that the composition or make-up of the activity is sufficiently homogeneous or otherwise susceptible to gross or broad measurement for higher headquarters purposes. The Factor is used for the programming of workload at the appropriate programming level and for reporting actural performance in relation to the programmed level of performance. It is a selected indicator, used as a barometer or gauge, to express the relationship of the work level in being or the work accomplished in relation to the level of resources utilization.

ARMY MANAGEMENT STRUCTURE
OBJECTIVES

To provide a uniform listing of the non-tactical activities of the Army with standard terminology, definitions and activity interrelationships for programming, budgeting and manpower control within the Army.

To provide a structural framework for issuance of Program and Budget Guidance directives under The Army Program System (AR 11-1).

To provide a structural framework for development of Operating Programs throughout the Army Establishment (AR 11-1).

To provide a basis for assuring a direct relationship between program objectives and resources in the accomplishment of command missions.

To provide consistent program cost accounting and budget classifications to support cost-based budget development (Public Law 863, 84th Congress).

To provide the structural framework for the uniform application of the Army Command Management System within the Army.

To assure relatability and consistency in the flow of program, manpower and budgetary data through command and technical channels.

To establish the activity levels of manpower, program cost and program performance data maintenance within the Army Establishment to meet Department of the Army reporting requirements.

To provide the structural framework for program progress and performance reporting, program cost reporting and manpower reporting and control.

To provide a common base for the evaluation of command program performance and resources utilization.

To assure maximum synchronization of functions and the administrative organization of the Army (Public Law 863, 84th Congress).

To provide a unified basis for appropriation accounting, program cost accounting, disbursement accounting, and revenue accounting.

To provide the base for development of mobilization annexes to Operating Programs.

Among the several objectives of the Management Structure are two derived from the requirements of Public Law 863. These are a requirement for consistency in budget and accounting classifications and a requirement for maximum synchronization of budget classifications with the administrative organization of the Army. The application of the Structure under the revised programming system provides for the accomplishment of a third requirement of Public Law 863, that of support of budget justification by program performance and cost data by organization. Coupled with certain additional tools of financial management derived from the Financial Management Plan of the Army, the major provisions of Public Law 863 will be satisfied and the Army will be well on its way toward cost-based budgeting.

As the Framework for Army Management, the Structure is static in nature and requires the identification of actions and procedures or the specification of systems by means of regulations and other directives in order to give dynamism to the framework. Effectively utilized, the Structure has considerable potential. Many specific benefits not mentioned heretofore are possible, such as reasonable stability of the Army's budget and program systems; a basis for a comprehensive financial management plan; the framework for a consolidated and meaningful reporting system directly correlated with operations, budgeting and programming; a common framework for obligation accounting and accrued expenditure accounting; provision of basic data for the effective and equitable application of expenditure limitations when required; and others.

This does not mean that the Structure as currently being constituted is the ultimate. It does mean, however, that the theory is basically sound. The Structure under development represents the reality of essential adjustment to partially meet each of the many and varied staff and command interests. In some instances, the identified activities are not functions. The extent of activity subdivision varies to meet various divergent requirements. The Performance Factors in some cases represent a compromise of divergent interests and some will undoubtedly be modified as more experience is gained in their use. In some cases there is hostility toward the Structure as the means of accomplishing the stated objectives. There is some apathy toward it. And perhaps of greatest concern, there is considerable lack of understanding of or interest in the Structure. In spite of these many millstones, however, the past year of development and the application of the Interim Structure in the field commands have brought an ever increasing realization that the Army Management Structure is a necessity and is here to stay.

This, in brief, is the Army Management Structure which ties together all the non-tactical activities of the Army in a common framework for use by all echelons of management from departmental level to the smallest installation or activity in the United States or Overseas. And just as the Army Management Structure is designed to meet the coordinate management control needs of Department of the Army Headquarters, it is essential that subordinate command echelons produce and issue their own internal management structures. Their point of departure is the Army Management Structure, the activities of which should be further subdivided only to the extent necessary to meet their own internal management requirements. Further, the extent of data maintenance and reporting should only be that which is essential to the effective management of the affairs of the command without undue interference with the prerogatives and responsibilities of lower echelon commanders.

(About the Author: Lt. Col. Cochran, GS (Arty), is Chief of the Programming Branch, Office of the Director of Management Analysis, Office of the Comptroller of the Army. Col. Cochran, who holds an AB Degree from the University of Utah, a BS Degree from the United States Military Academy, and an MBA Degree from Syracuse University served as Maneuver Comptroller for Exercise SAGE BRUSH in 1955 and for the past year has also been Chairman and Director of the Army Management Structure Project Group. He has long been a staunch advocate of coordinated management and coincident programming and budgeting).

THE USE OF MANAGEMENT ENGINEERING TECHNIQUES IN THE COMPTROLLER FIELD

Lt. Col. John R. Westwood, USAF
and
Emil Marecki

The discharge of Comptroller responsibilities is irrevocably wedded to the proper processing of a large variety of different official documents in mountainous quantities. Documents concerned with the availability of funds, the employment and termination of people, the procurement of resources, the payment of duly authorized obligations, and the status of the overall command are only a few of the many types which originate or find a final resting place in the Comptroller organization. Each document must be processed in keeping with its own collection of gound rules, frequently resulting in the recording of prescribed information in more than our segment of the organization. Reports due from these recordings are always required earlier than it is humanly possible to produce them. Meeting dead lines is further complicated by the late receipt of data from outlying organizations, and the necessity for reconciling data recorded in more than one location. The late receipt of feeder reports most frequently results in compressing the already too-short period of time allotted the consolidation of data and the preparation of comprehensive reports. In turn this results in short cutting, and sometimes even eliminating, certain balancing and consistency operations. Reconciliation of balances, an undesirable task at best, is a must often leading to frayed nerves, short tempers, costly overtime, "plugged" figures and the like. In review then, the Comptroller's responsibility may be briefly described as a paper-mill of gigantic proportions reaching into every phase of the commands mission. The role it plays in properly recording and reporting all transactions affecting the mission is one of utmost importance to the adequate discharge of mission, command and headquarters responsibilities.The diversity of recordings and the insatiable demand for more and earlier reporting require an ever increasing manpower expansion. Even a casual observation of Comptroller problems would indicate that this was a fertile field for the application of engineering principles recognizing that the most satisfactory solution of existing problems would involve crossing Comptroller and other organizational lines.

Probably the most lucrative area, from the point of view of overall improvement, is the Supply Operation involving many different organizational segments of Supply and Comptroller. This application appeared to contain all the undesirable characteristics so conducive to inaccurate recording and untimely reporting. The system finally implemented consists largely of reducing to punched card form each necessary document affecting the supply position and using that punched card to complete such functions as the up-dating of the inventory, and the distributing of costs. Since all processing is done mechanically rather than manually all operations are completed with mechanical speed and accuracy. Most of the original undesirable characteristics had vanished. The necessity for many copies of each type of document no longer existed. Each remaining document was copied or transcribed or otherwise recorded fewer times. The shrinkage of this particular paper mill was directly reflected in the number of people engaged in processing supply documents in the supply area, without compromising the accuracy or timeliness of reporting.

The next largest area of potential improvement was wholly contained within the Comptroller complex. Documents pertaining to the purchase of, or receipt of, or payment for resources, were received in 4 copies. Each copy was destined to play a part in the very necessary control of obligations and expenditures. The first copy was recorded by batches in ledgers concerned with allotments and budget codes. The second concerned itself with payments for resources received. The third supported the entries in the General Ledger and the fourth the distribution of expenses. The close of a reporting period was usually accompanied by accelerated effort in order to reconcile the books and to prepare necessary reports. Here again are found the characteristics which tend to hinder smoothe, accurate and timely processing in that the method involves handling 4 times the documents required, duplication of effort, unnecessary reconciliation, and the consumption of large quantities of valuable time when time is at a premium.

The plan developed interestingly. First it was determined that the recording and reporting requirements of Accounting and Finance were related to the point of inseparability and should, therefore, be more effectively administrated by a single individual. This finding resulted in the melding of these two functions

into a single organization completely responsible to satisfy the demands of both Accounting and Finance. Secondly, as the processing procedures developed, it became increasingly evident that many additional advantages could be gained by exploiting the maneuverability of punched card unit records and the speed and accuracy of electrical accounting equipment. Consequently the technical know-how and the resources of the Statistical Service System were used extensively in arriving at an adequate solution. The system implemented eliminates all duplications. All documents are received for processing and registered at a single point. All documents are maintained in a single consolidated file. Standard frequently used codes, mechanically produced, are kept in prepunched card files not subject to copying or transcription errors. All documents are verified, checked and coded completely at a single location. Only one control is required to keep all elements in balance on a daily basis. All end products are produced with mechanical speed and accuracy from a single source.

Here again was demonstrated that the intelligent application of management engineering principles reached far beyond the development of a processing procedure to be followed by a single purpose organizational element.

At this stage of the development it began to be apparent that the increase in the volume of documents to be processed was steadily increasing. Because of a rigid hold-the-line policy, it was not possible to increase manpower to offset additional volume. Neither was it possible to extend submission deadlines. The solution appeared to be in the use of faster, more accurate processing equipment. It was, therefore, determined that the next area to be overhauled, Civilian Payroll, would because of its complexity, find its solution in the use of a medium sized computer.

The problems involved in this area were many and varied. The Civilian Payroll operation reaches into every state, about 3 times as many are paid as are physically located on base, and is bound by Federal and State Law as well as Air Force and other governmental regulations. A relatively simple processing routine has been developed and proved, on a medium sized computer installed at a neighboring Air Force Base. Early implementation is planned and improvements are expected to yield benefits at least as great as those experienced in the other areas worked over.

Statistical Services, whose responsibility reaches into such areas as military and civilian personnel, aircraft, and installations has always been confronted with a monstrous processing and reporting problem. This problem is currently being organized into digestible segments. Each of these segments is being completely re-engineered in such a way that problems will be eliminated or at least minimized and accuracy and speed considerably improved — all to be accomplished with fewer resources. Immediately following the completion of work in the statistical reporting area, work will begin to re-do the punch card system from the point of view of computers. Thus, it might be said, the application of management techniques is a never completed task — yesterday's solutions are today's problems.

Improvements of the nature described are seldom realized without difficulties. People might almost be considered a synonym for difficulties since people must agree on such as terminology, codes, controls, flow and the like. People are frequently opposed to change, often object to cross training and are against reassignment particularly where no promotion is involved. Wherever an active management improgement program is pursued it is well to lean rather heavily toward humal relationship.

UNIFICATION AND INTERNATIONAL COOPERATION AT WORK IN THE PARIS CHAPTER

D. F. McGrath
Secretary, Parish Chapter of ASMC

The Parish Chapter of American Society of Military Comptrollers, located as the Chapter name indicates at one of the hubs of the North Atlantic Treaty Organization system, is a most fertile field for membership in the American Society of Military Comptrollers from all branches of the services as well as other government activities. This fact and the active interest of the membership of this chapter during the past year have clearly shown that unification of and cooperation between the services is actively and positively assisted by such activities as the American Society of Military Comptrollers.

Current active membership in the Paris Chapter covers representation from Supreme Headquarters Allied Powers Europe, United States European Command, United States Army Europe, United States Air Forces Europe, United States Army Communications Zone, Army Audit Agency, United States General Accounting Office, amongst others. The chapter has also extended associate membership to a selected number of individuals from Allied countries who are actively engaged in Comptroller activities in connection with the North Atlantic Treaty Organization such as Supreme Headquarters Allied Powers Europe and Central French Liaison Mission. Needless to say, with so many major activities functioning in the Paris area, members are in frequent official contact. These contacts, often brief written or telephonic communications, cover only the immediate problem area of the initiator. The extra effort or personal interest in these contacts, which stems from mutual association in the American Society of Military Comptrollers, has proven itself many times over to be of inestimable value in encouraging frank discussions and eliminating possible misunderstandings, the net result of which is prompt, efficient and completed actions.

The overall objective and purpose of the American Society of Military Comptrollers, in providing an informal vehicle through which members may improve the high standards of the profession of Military Comptrollership, cannot be overemphasized. The rapidly changing pattern of systems, missions, organizations and methods in our present day world more than ever demands closer, harmonious relationship between individuals and activities having common interest areas. What better way to achieve this close relationship than through the media of the professional society.

Paris Chapter, American Society of Military Comptrollers, has attempted, through regular meetings and special social events, to engender a spirit of close working relationship between members of all services and activities represented. A program of prominent speakers in the field of comptrollership is pursued and every effort is made to meet with the many distinguished visitors to the Paris area to hear their views on current matters of comptroller interest. Thus, our chapter is enjoying the by-product of our location as the official visitors to Supreme Headquarters Allied Powers Europe, United States European Command, North Atlantic Treaty Organization, United States Embassy, Paris, etc., as well as those officials permanently stationed at these activities, provide an unlimited source of exceptional speakers who may address us.

The Paris Chapter has proposed to the National Council an amendment to the constitution which would permit active membership for qualified and selected individuals of foreign nationality who are associated with the North Atlantic Treaty Organization. Such members can add to the knowledge already available within the society and their active participation can have a rewarding effect in broadening the areas of research available to the entire membership of the society.

Thus, while the American Society of Military Comptrollers offers us all the possibility to broaden ourselves in the field of Military Comptrollership, we in the Paris Chapter are endeavoring to reap these benefits and at the same time to enrich the society as a whole through our contact with international affairs directly associated with Military Comptrollership.

FINANCIAL PLANNING AND MANAGEMENT AT THE PEARL HARBOR NAVAL SHIPYARD

Captain Frank G. Springer, USN
Comptroller, Pearl Harbor Naval Shipyard

The officers and civilians of the Pearl Harbor Naval Shipyard look upon their Shipyard not only as an agency of the Department of Defense, but also as an integral part of the Island economy. We try to operate the Shipyard in a manner that will provide satisfactory service to the Pacific Fleet with minimum cost to the taxpayers. We also try to be responsible members of the local community. The purpose of this presentation is to provide a better understanding of one important aspect of Shipyard operation — financial planning and management. In this area of management the Bureau of Ships, the Navy Comptroller and the Comptroller of the Department of Defense establish the basic policies, systems and procedures. Therefore, the framework for financial planning and management at the Pearl Harbor Naval Shipyard is essentially the same as at other ten (10) naval shipyards. Since the total annual volume of business during the past fiscal year for all naval shipyards was about $750,000,000, sound, modern financial administration is vital.

General Description of Pearl Harbor Naval Shipyard

The Pearl Harbor Naval shipyard is the largest and most completely equipped industrial establishment between the United States mainland and Japan. The workload of the Shipyard is in three categories: regular overhauls of Naval vessels, other shipwork and non-shipwork. Regular overhauls involve alterations, repairs and docking of vessels assigned on a periodic schedule. During fiscal year 1957 the Shipyard handled 77 regular overhauls. Other shipwork consists primarily of voyage and emergency repairs on a non-scheduled basis. During fiscal year 1957 repair services to 778 vessels were in this category. Non-shipwork consists primarily of support services of a military nature not involving ships directly. Examples of this are maintenance of public quarters, passive defense training and mobilization planning. Work on private vessels is confined to emergency repairs beyond the capacity of local commercial facilities.

To carry out its job the Shipyard has 21 industrial shops. In addition, we operate two power plants supplying steam and electricity not only for our own use but also for the entire Naval Base and for the adjacent Hickam Air Force Base. We have four dry docks, one of which is capable of handling Forrestal class carriers. We also have two marine railways and a floating drydock. Our cranes are capable of lifting up to 200 tons capacity. The plant book value (cost, not replacement, value) is 131 million dollars. The total area of the Shipyard is 600 acres, and there are 4 miles of waterfront and berthing. At the peak of World War II the Shipyard had about 25,000 employees.

The Shipyard currently has about 4,600 employees. Most of these employees are hired locally, in 108 industrial trades, and in practically all categories of clerical and technical positions. During the past fiscal year the Shipyard paid approximately $28,000,000 in wages and salaries to an average of about 5,300 employees. In addition, the Shipyard bought from local suppliers approximately $2,000,000 worth of supplies and services — a total contribution of $30,000,000 to the Island economy in one year. The Shipyard's annual volume of business was about $36,000,000.

Accounting System

The Shipyard is on an accrual system of accounting and employs the double-entry method of bookkeeping similar to that used in private business. We make use of a working capital fund established by the Navy Department to finance commercial and industrial types of operations. Known as the Navy Industrial Fund, it is a revolving fund from which cash is drawn to pay all costs, excluding depreciation and military pay, of current operation, including the indirect costs for operation and maintenance of the general service departments, such as Public Works, Supply, Comptroller and general Administrative. Such amounts withdrawn are later recovered by the fund when the money is received from the customers. There is one major difference between this system and that used in private business. Navy Industrial Fund activities operate toward a break-even point. The goal is neither a profit nor a loss.

Most of our work is on a job cost basis, while only a small proportion is process costed. The Pearl Harbor Naval Shipyard as well as the other 10 naval shipyards are gradually working toward a system of standard costs. The development of standard costs is expected to take a period of several years. The nature of work in

naval shipyards is such that standards are difficult to establish. Accordingly, it is not known what proportion of the work eventually will be priced on the basis of standard costs.

Currently, practically all prices are based on actual charges for direct labor and direct material plus an applied overhead rate. The overhead rate is applied with respect to direct labor hours. The financial planning and management exercised by the Shipyard in the case of direct labor and direct material are largely through accurate, comparative reporting of actual costs as against planning and shop estimates and focusing attention to areas of significant variances.

By far the major efforts of the Shipyard with respect to financial planning and management is in the realm of overhead costs. Our overhead budget is now about $15,000,000 per year.

All persons desiring to compare costs of production in the industrial or commercial-type of defense establishments with costs of similar private establishments should be aware of the difficulty of full comparison of costs. Whereas the Shipyard does not pay taxes, insurance, etc., it is engaged heavily in training and in the operation and maintenance of facilities and organizations under peacetime conditions for use in an emergency. Such operations are not necessarily economical from a business viewpoint; and it is not possible in every case to distinguish precisely between industrial and non-industrial costs. Identifiable non-industrial costs of shipyard operation are excluded from the costs of industrial operation.

Considerations That Influence Financial Planning and Management

There are a number of considerations that influence financial planning and management at the Pearl Harbor Naval Shipyard. These, not necessarily in the order of importance, include:

1. service to the Fleet,
2. limited funds for Fleet maintenance and upkeep,
3. customer relationships —
   a. lowest costs practical, and
   b. stabilized applied overhead rate,
4. overhead expense in proper relationship to the productive workload,
5. retained earnings balance close to zero at the end of each fiscal quarter,
6. minimum fluctuations in retained earnings,
7. minimum funds tied up in material inventories and accounts receivable,
8. safeguarding the assets,
9. minimum fluctuations in employment,
10. retention of experienced employees having critical skills required for effective mobilization,
11. plant maintenance and upkeep not only for current operations but also adequate for mobilization,
12. comparisons with other naval shipyards, and
13. review by the Navy Department and other higher levels of the Government.

Tools for Financial Planning and Management

Based on these considerations the Shipyard prepares annual and quarterly budgets. The Comptroller Department (Budget and Statistics Division) coordinates the preparation of the budgets for the Shipyard as a whole. The Comptroller Department also has developed a well-integrated Review and Analysis Program of periodic (monthly, quarterly and annual) and special financial reports, forecasts, analyses, graphical presentations and internal review. The purpose of this Review and Analysis Program is to provide the Shipyard Commander and the various department heads with carefully selected data and properly developed recommendations for guidance in making management decisions and initiating action. Emphasis is on usefulness, timeliness, clarity and minimum cost of preparing the reports and analyses. When significant trends and budget variances in particular areas are discerned through analysis and evaluation, they are brought to the attention of management with recommendations for action or further study.

Budget Preparation

Let us next consider how we prepare our annual and quarterly budgets. Preparation of the annual budget is initiated early in April to become effective on the first of July. Preparation of the quarterly budgets begins about three (3) months prior to the start of the budget quarter.

Workload. A Productive Workload Forecast (PWF) is prepared by the Comptroller Department each month showing the anticipated Shipyard workload for the current month and next five months. A copy of this PWF is furnished each month to all department heads and shop masters. In the case of the annual budget there is an additional forecast of workload (beyond the period covered by the PWF) through the entire forthcoming fiscal year.

Policy. Three months prior to the start of the fiscal year and of each quarter, a Shipyard

Notice is published and given wide distribution within the Shipyard. This notice provides information as to the anticipated level of employment. The notice also contains the Shipyard Commander's policies relative to the extent to which facilities and equipment are to be maintained, the scheduling of annual leave, the use of overtime and the overhead rate to be charged to our customers. This notice also sets the deadline dates when the budgets must be completed and forwarded to the Comptroller Department.

Forms and Instructions. Budget forms are delivered to all shops and offices. The Shipyard Budget Manual sets forth the detailed procedures for the preparation of the budgets.

Development of Budgets:

1. Productive Work Budget. The total number of productive workers in the cost centers performing such work is summarized by category of work, such as new construction shipwork, overhauls and repairs to ships, ship alterations, etc. The estimated cost is developed for each category and the total of all productive work.
2. Distribution of Personnel. Each cost center breaks down its personnel into the following categories: (a) overhead workers (indirect labor), (b) productive workers (direct labor), (c) military support, (d) absences, and (e) loans and borrows.
3. Overhead Expense Budget
   a. In accordance with the definitions of overhead cost classes and/or cost functions contained in the Budget Manual, each cost center estimates the number of personnel and the total dollar requirements for labor and materials to be charged as overhead expense.
   b. Long Range Maintenance Plan
      (1) To facilitate stabilizing the overhead rate and thereby help equalize costs to our customers, the Shipyard has developed a Long Range Maintenance Plan. This Plan covers all maintenance, including major non-recurring, major recurring and contract items for which the Public Works Officer is responsible. The Plan includes a chart showing anticipated expenses (including accruals) per quarter by categories of maintenance, including total anticipated expenses per quarter. The plan projects through Fiscal Year 1962.
      (2) With each quarterly budget submission, the Public Works Officer modifies the Plan (if and as appropriate) for the forthcoming 24 months.
4. Military Support Budget. Cost centers performing work of a military support nature estimate their dollar requirements for the number of personnel to be employed on such work. Military support services are generally performed by General Expense Cost Centers. In order to avoid having the cost of performing military support services charged indirectly as overhead expense to our customers, the Bureau of Ships provides a separate allotment to finance such services.
5. Financial Policy Board. After the Comptroller Department has reviewed, analyzed and discussed the budget submissions with departmental budget administrators, the Comptroller calls a meeting of the Shipyard Financial Policy Board. The membership of this Board consists of the Comptroller, who is Chairman, and the heads of the larger departments - the Production Officer, Planning Officer, Supply Officer and Public Works Officer. The Special Assistant to the Comptroller serves as the Recorder, and the Head of the Budget and Statistics Division is present to furnish technical advice and detailed back-up data. This Board serves in an advisory capacity to the Comptroller with regard to financial matters affecting the operations of the Shipyard. After discussing the proposed overhead expense budget with the other members of the Board, the Comptroller recommends to the Shipyard Commander the overhead rate to applied and any special action of a policy nature that appears necessary.

Monthly Financial Forecast

In addition to the annual and quarterly budgets, we prepare and make use of monthly financial forecasts. The purpose of our financial forecasts is to keep close chack on overhead costs, budgeted income and retained earnings as affected by unanticipated fluctuations in workload. The forecasts extend through the balance of the current fiscal year.

Summary Financial Analyses of Operations

We also prepare summary financial analyses of operations. These include selected data from the balance sheet and income and expense statement, and other information of interest to

management. These analyses are issued monthly and cover the current quarter to-date. They consist of two parts - trends and actual vs. budgeted performance.

Quarterly and Special Cost Analyses

In addition, we prepare quarterly and special cost analyses. These are comprehensive studies, including charts prepared upon the completion of each quarter, to determine the adequacy and propriety of applied overhead, process and facility service rates to customers and of accrual rates for maintenance, and to locate areas and causes of variances and trends in the costs of operation. Special cost studies are made on a case basis of situations that appear to warrant investigation.

Graphical Presentations

The foregoing are supplemented by graphs. The Comptroller Department presents these graphs monthly to the Shipyard Commander and the department heads. The graphs are also presented, on selective basis, to key officers and civilians at lower levels of management for guidance. These graphs show highlights, including trends and budget variances, for such items as employment, productive workload, overhead labor and material expense, overhead rates, direct labor rates, and the status of the Military Support Allotment. The graphs also call attention to suggested areas for concentration of efforts to reduce costs, such as reduction in paperwork, sick leave, overtime, overhead labor, overhead consumable supplies and equipment, maintenance, utilities, consolidation of facilities and/or putting some in standby status, closer relationship between actual and estimated costs, increased productivity, and continued improvement in the production planning and control system. A number of graphs include not only information pertinent to Pearl Harbor but also comparative data with respect to the other naval shipyards where considered appropriate and useful.

Internal Review

Last, but not the least, among the tools of financial management in a naval shipyard is the system of internal review. As in private industry, we have instituted here a system of internal control and procedural review which is separate and distinct from the functions of budgeting and accounting. This independent, first-hand review of the operations in the accounting and financial management area serves as a practical medium to assure the observance of basic policies and procedures, the safeguarding of the assets, the reliability of the accounting data, and the accuracy and usefulness of the financial and operating reports upon which so many of our managerial decisions and actions are based. The Head of the Internal Review Division reports directly to the Comptroller. Navy-wide internal auditing is one of the functions of the Navy Comptroller.

Conclusion

By the adoption and expansion of financial planning, the development and utilization of financial review and analysis and other tools and techniques of modern business in the broad area of comptrollership, we share in management's responsibility for serving the Fleet. Our goal is to attain the lowest possible cost consistent with quality and readiness to fight.

A LOOK AT BUSINESS AUTOMATION IN THE ARMY

J. Paul Kingston
Office, Director of Management Analysis
Office of the Comptroller of the Army

It has been seven short years since the phenomenon of electronic computers for use in business procedures was introduced commercially. In a sense, it has been seven long years for those who have followed the growth of computers closely and for those who have been champing at the bit to gain the widely advertised benefits.

During these seven years, all of us have been groping for answers to the questions of when, where and how best to put these computers to work. And everyone has been looking to the pioneer — the man who has one — to see how he did it.

Those who dared to be among the first to apply computers to their business procedures have been congratulated and sometimes criticized for their efforts. To my mind, these pioneers deserve commendation, for it was only through such pioneering that the false starts and the pitfalls were identified.

Now this early experience has indeed been helpful. But this does not mean that the guidelines developed by these efforts have set an absolute pattern for the solution of our problems. In the computer field the rude awakening comes quickly. One finds that we are still in the pioneering stage and that each proposed application must be defined clearly and resolved on its own merits. The job cannot be done by sitting behind our desks reading about this experience.

So, at this stage of computer development and application, after seven years, we must ask ourselves — have we learned from experience? This is simple. The obvious answer is — yes. But now that we claim benefits from these observations, the next questions are — how does the Army proceed to profit from this experience? — How far should it go? — And how should it get there? These are difficult questions.

WHERE WE STAND TODAY

In analyzing these questions, it is necessary to examine past actions and to take a reading of the current situation to determine how many computers are being used and how they are being used.

In the past, the Corps of Engineers, the Signal Corps, the Ordnance Corps and others have accomplished much as initial users of this type equipment in engineering computations, weapons fire control systems, ballistics and a wide range of research. Collectively, these actions have provided a wealth of experience which has proven extremely valuable in extending computer concepts to business procedures. These agencies were pioneers in their own right. The Army did not, after all, have to depend solely on the trials and errors of others.

At the present time, four large scale and seven medium scale computers are being operated by various agencies and a small scale machine is under operational test. The majority of this equipment is being used in the supply area for supply control, supply management, stock accounting and a wide variety of related applications. In another area, a large size computer is being applied successfully to the military personnel accounting operations by The Adjutant General.

While financial operations have not yet been applied in significant numbers, some limited applications to cost accounting, payroll, disbursement and collections have been noted. A considerable number of studies are under way in the financial area, however, and much activity is to be expected in the near future.

Ten more medium size computers are in the process of either being installed or under consideration for approval. Beyond this, there are over twenty major studies under way. This does not mean, however, that only twenty more pieces of equipment will be acquired. Some of the studies cover a wide range of application. For example, one study alone, being conducted at a class I installation by our own office (Comptroller of the Army), could conceivably result in plans for 30 to 40 medium scale computers.

WHAT HAVE WE GAINED?

The two phrases "computer use" and "tremendous savings" have long been considered synonymous and have been household phrases. These highly publicized claims have had their effect on the public, on management and on the working force.

In reviewing the advancements in computer uses then, one question inevitably arises, that is — what reductions in costs of operations and other benefits have been realized?

Actually, sufficient time has not elapsed to reveal the full effect of computers installed to date and to make an intelligent over-all appraisal.

While substantial reductions in operating costs are theoretically possible, and may come about in some installations, Army experience has not produced extreme examples.

Some modest cost reductions have occurred as a result of computer applications. But, I have concluded reluctantly that the hoped for dollar savings have not materialized at this stage. This conclusion is not unique — it seems to be a conclusion reached by many.

There are indications, however, that much improvement in accuracy, in timeliness of data produced, and better management of our resources have been attained. Furthermore, there seems to exist a good possibility that further increased effectiveness and greater conclusive dollar savings will develop in our computer installations as experience with them grows.

A PARADOX

As a consequence of the situation described, the theme of financial gain is generally being played down in favor of attaining more effective processes. As we look back on it today we see good reason for this development.

Unlike changes to systems with conventional equipment, where a cut-off can usually be established for a relatively clean and quick change over of procedures, the introduction of computers is more complicated. A period of parallel operation is usually required to verify results against original procedures. Long periods of parallel operations are obviously costly and should be avoided, if at all possible.

When unavoidable and when such cost is added to the costs of extensive studies, training and site-preparation, a very substantial initial investment is created which must be recouped from continuing operating costs. All this means that current operating costs increase for a protracted period of time. Consequently, a bulge in expenditures is created which presents a significant problem to the Army as it undoubtedly does for others. It is particularly inappropriate in this period when the military budgets have suddenly become austere.

In the Army, as elsewhere, commanders are looking for ways and means to reduce current budgets. They are looking to avoid conditions which add to their costs even for limited periods.

The Armed Forces are faced with a paradox in coping with increased administrative loads and still maintaining or lowering its resources to do the job. Some have felt that computers can fill the void left vacant by personnel reductions. For the present, this seems like a fond hope.

In any event, how can we convince a commander — or should we — that installation of a computer is the right thing to do if all we can show him is increased costs? The benefits otherwise must be extremely high and must be convincing to counteract this cost bulge.

So, despite the playing down of financial gain through personnel and other reductions, the dollar cost factor cannot be overlooked. As a matter of fact, I feel that the dollar saving factor in justifications for computers probably will get a closer look rather than a lesser look. It has contributed already to a recent re-examination of pending computer proposals.

THE SCOPE OF AUTOMATION

Most computers installed in the business procedures area have been superimposed over punched card systems (we call them Electric Accounting Machines — or EAM). Computers themselves are dependent, at least partially, on either off-line or on-line punched card processes. Moreover, EAM is often considered a stepping stone and a good prelude to computer use.

If this dependency on EAM is altered in the future it will probably be gradual. Because of this dependency, the relationship between punched card and computer processes should not be lost sight of in the light of current emphasis on computers. Therefore, one eye ought to be kept on computers and the other eye on punched card equipment to keep them in proper focus.

The amount of monies paid for mechanization of the Army's business type processes is not generally realized. At this writing, there are 213 punched card installations operating at a rental cost of about $10.5 million and with related personnel and supply costs of about $38.5 million. Add to this, $5 million in rentals and $11 million for personnel and supply costs for the twelve current and ten proposed computers, and the grand total reaches $65 million.

Consider also that the production momentum of the computer industry is beginning to look fantastic. Authorities say that at least eight large and forty medium scale computers are being produced every month. Conservatively, then, the national rental curve for computers is increasing by well over $800,000 per month. And, contrary to popular belief, and in spite of some replacement by computers, the use of EAM is expanding as well. Since the Army is no exception, I expect it will share this increased use and swing upward in its rentals for mechanization along with the national curve.

In five years it is very possible that the

combined EAM and computer rentals and related costs of the Army could reach $100 million a year (excluding other forms of mechanization and the inflationary trend). When you consider further that a wide range of operations depends upon the products of this mechanization, this figure can be exploded logically to affect total operations costing well over a billion dollars.

These figures are not cited to create phantasy out of fact or to place emphasis on computers out of proportion to a host of other problems. They are cited merely to convey the fact that, collectively, computers and EAM have become a potent force which cannot be overlooked.

This type equipment will have already permeated through the gamut of business procedures in the not too distant future. Therefore, the potential area for improving operations through their use now takes on a complexion of sizable proportions. In this atmosphere, it is no wonder that high level interest has been generated in the field of military business automation.

THE ARMY'S GOALS

Unilateral and loosely coordinated actions are sometimes necessary in the initial stage of any wide-spread venture in order to get under way in areas in which benefits are apparent. The initial stage of computer application provided sufficient facts to allow a reasonable measurement of the probable impact and the scope of computer activity.

These measurements pointed up rather conclusively and forcefully the fact that coordination and monitorship of future computer efforts were desirable. Now it has always been the objective of the Army to secure the benefits of advancing technology. To exploit fully the potentials of computers, then, it was determined that some kind of a master plan — a long range plan — should be established to assure that agencies were pointed in the right direction to derive the greatest benefit from the extensive efforts expected to take place.

Initially, then, most computers installed were considered quite naturally to be short range in nature. That is, they were the initial actions where relatively immediate prospects existed for achieving more effective operations, gaining experience, and at the same time realizing a reasonable return of investment commensurate with the costs involved. Characteristics of these short range installations were high volumes, repetitive operations and an urgency to reduce processing time or otherwise improve procedures.

The next and more important goal, however, is a mid range effort to extend the initial applications (both vertically and horizontally) in a phased and coordinated manner and to connect these systems with appropriate communication links. It is also the time interval in which to become more sophisticated in the initial areas of application, to bed them down, and to recoup the initial investments.

The ultimate or long range goal is to achieve major systems improvements and to integrate related systems to the maximum extent allowable within the capabilities of equipment. The possibility of integrating systems means that substantial benefits may accrue in some areas at every level by a computer service-center concept. So, the long range plan includes, wherever practicable, provision for service-type data processing from the lowest level of source documentation upwards to the control centers of functional systems. These long range goals will take time to reach — on the order of ten years.

These are ambitious goals which may sound like glib phrases rather than concrete plans. But if orderly progress is to be made in this era of business automation, a master plan of this type, as an umbrella over these extensive efforts, is essential and will pay dividends.

These plans are not the result of individual effort. Major agencies have contributed impetus to their development over a two year span. The Comptroller of the Army (Data Processing Systems Division, Office, Director of Management Analysis) has been assigned the job of coordinating these endeavors under the guidance of Mr. Roderick, the Assistant Secretary of the Army (Financial Management).

The major agencies concerned are now developing, or have already formalized, specific plans in their functional areas within the concepts of the over-all goals. Admittedly, these plans are not perfect nor all inclusive. But they do provide essential guidelines for establishing where emphasis should be placed and the degree of coordination necessary to achieve maximum orderly progress.

PROGRESS CREATES PROBLEMS

The trend to increasing business automation has brought with it many challenging problems. Some of the problems seem like old hat, but others are unfamiliar. An ancillary and important benefit of operating under a long range plan in this case, is that it will enable identification of the extent of attention needed at headquarters, command and operating levels to solve the problem areas. There just doesn't appear to be

any other way to measure advancement and to keep the problems in focus. A saving planning factor is that computer examinations take time — extensive time — in terms of months and sometimes a year or more. This gives time, if taken, to cope with the expected problem areas.

A significant reason for long range planning in the first place then, is the need to gauge the pace of the future within the capabilities to absorb and use these new ideas and techniques. It is quite possible for the pace of application to outrun the ability to assimilate these machines. This places training of both civilian and military personnel at the head of the list of problems.

Manufacturer schools, of course, are relied upon extensively for much of this training. But the Army has taken steps to meet its own training needs in the important area of systems analysis on an increasing scale. For example, the Ordnance Corps has established two systems courses, one at Rock Island, Ill., and the other at Aberdeen, Md. The Signal Corps has established a course at Fort Monmouth, N. J., and The Adjutant General is expected to institute a course at Fort Benjamin Harrison.

The words long, tedious, and unusually complex, describe the computer analysis process. The caliber of the analyst must be high. These courses are designed to teach the fundamentals of computers and how to make the best use of them. They are expected to produce about 2,000 individuals over the next four years — 500 a year — trained to varying degrees in the art of computer analysis or an understanding of them. This is a concrete reflection of the scope of study expected to occur in the field organization.

Some of the additional problem areas are the dissemination of information to field personnel, orientation of both command and staff to an awareness of the possibilities and problems confronting us and the part they play, the manner of funding, guidance to agencies in the conduct of studies, and how to select equipment best for the purpose.

Also, there is a group of technical problems, such as compatability of equipment, communication services, and ruggedness and mobility of equipment for Field Army use. In this last case, there is also the question of evaluating the equipment developed, for possible Army-wide use to supplant commercially available services.

All these problems have major ramifications of their own. They cannot be solved overnight or simultaneously, but they must be solved as quickly as possible to give force and effect to any long range plan.

TOP VALUE THROUGH INTEGRATION

Notwithstanding the cost situation discussed earlier, the potentials of computers contain a lure of more effective processing of data which cannot be ignored. While most computer applications may be limited in their functional or organizational scope, some will effect the procedures of many organizations both on-site and off-site.

Important here is the fact that most will present an opportunity to make use of common source data for multiple purposes, much more so than has been the case with punched card or other conventional procedures.

This possibility, indeed, the necessity for integrating procedures in this manner is extremely important, because it is in this manner that a primary computer advantage is becoming evident. This is a reason too, why a computer service-center concept, mentioned in connection with the long range goal, may bring beneficial results and contribute to reducing costs.

Manufacturers of computers promise startling improvements for the future, both in computer design and in application potential. True or not, it will be necessary to plan for this contingency and that our analysts be trained to recognize these improvements when they see them and adjust their sights accordingly. We cannot afford to build a concrete casement of rigid procedures to such an extent that we cannot take advantage of these new developments without an upheaval of methods and services. Long range planning will lessen this possibility or prevent this from happening.

In this total effort there is one final important element; that is, that progress in mechanization cannot be measured in terms of numbers of machines alone. Progress in this area will be measured in terms of attaining integration, increased effectiveness and reduced costs.

Well conceived long range planning will assist in establishing guidelines for achieving these major goals. The army has decided wisely in investing a major effort for the long pull. While it is a sizable task which demands extensive and continuing coordination and planning, the Army is on top of the situation.

FINANCIAL MANAGEMENT IN MILITARY SEA TRANSPORTATION SERVICE

S. H. Howard
Office of Comptroller, MSTS

Financial management in the Military Sea Transportation Service (MSTS) is not the result of the efforts of any one individual, or for that matter, of any single organizational unit in MSTS. It is accomplished by COMSTS through the coordinated efforts of the Comptroller of MSTS and the Heads of the Operating Divisions responsible for the performance of MSTS operations. This "team" effort at headquarters, MSTS in Washington, D. C., is duplicated at all major subordinate commands.

The MSTS job is to furnish the Department of Defense a world-wide ocean transportation service for cargo, petroleum and military and civilian personnel and their dependents. MSTS is proud of the record it has compiled since its inception in October, 1949. This pride stems not just from the accomplishment of its mission, but more from the ability to perform this vast operation under conditions of sharply changing requirements in an efficient and economical manner.

During the first year of its operation under the Navy Industrial Fund, for the fiscal year ending 30 June 1951, MSTS transported 20 million measurement tons of cargo, 1.7 million passengers and 13 million long tons of petroleum at a total cost of a little more than $500,000,000.

As a result of hostilities in Korea the MSTS workload increased sharply in the succeeding two years. In the year ended June 1953, the MSTS workload totaled 29 million measurement tons of cargo, more than two and a half million military and civilian passengers and 17 million long tons of petroleum. The total cost of this operation exceeded $700,000,000.

Following Korea, MSTS operations again declined. Fourteen million measurement tons of cargo, 745,000 passengers and 15 million long tons of petroleum were transported in the year ended June 1957. The total cost of this year's operation was $427,000,000.

Even more impressive than the ability to effect increases and reductions in manpower, ships and costs commensurate with workload requirements, is the promptness with which these actions took place. MSTS was able, without regard to annual appropriations, to increase its operating expenses under emergency conditions and correspondingly reduce expenses during normal peace time periods. The ability of MSTS to readily and economically reduce manpower, ships and costs with changes in workload lies in the flexibility of operations and the high degree of financial management exercised under the Navy Industrial Fund.

Industrial Fund financing is a revolving fund established to finance operations, the costs of which are reimbursed by direct billings to customers and made available for re-use. It is a business-type approach which gears levels of operations to the workload as it develops. It provides simplified financing, emphasizes end-product costs, creates cost consciousness, and promptly and factually pinpoints problem areas. However, the Industrial Fund concept is but a tool, and as any other tool, must be properly used to attain the full benefits of its intended purpose. This tool is most effectively used in the financial management of MSTS operations.

Financial management begins at MSTS with the development of a schedule of composite tariffs. These tariffs are computed on the basis of customer requirements for the forthcoming fiscal year and the estimated cost of performing this service. Customer agencies are billed for services performed in accordance with these tariffs. This is the means by which MSTS recovers its cost, and these funds are again available for re-use by MSTS. The tariffs therefore are, in effect, overall predetermined cost standards. They are the basic management tool by which actual accomplishments are compared with planned workload and costs. Results of the application of these tariffs are under constant review. A summary review of the financial results of each month's operation is highlighted at a monthly fiscal conference.

Monthly fiscal conferences are held at headquarters and also at the major command offices. The conference is presided over by the Commander of MSTS at headquarters and by the Area Commander at the respective commands. It is attended by key personnel, both military and civilian. The presentation, made by the Comptroller and the respective Heads of the Operating Divisions, reflects the high degree of coordination exercised.

The content of the conference is simple and effective. The pattern of the conference is established by a summary review presented by the Comptroller. The Comptroller accounts for significant changes in the consolidated assets and liabilities of the MSTS organization, and briefly discusses the results of operations in

terms of net profit or loss. A comparison of actual expenses with budgeted costs are also presented, giving reasons for any major variations.

The Heads of Operating Divisions follow the Comptroller presentation with a comprehensive financial analysis of their respective operations. The financial results are reviewed according to the different types of shipping arrangements employed in the ocean transportation service performed. Operational performance is reviewed for its effect on the financial results. This analysis is correlated with the variable factors affecting current operations. Such variable factors may include changes in customer requirements, shifts in area of operation that affect traffic patterns, changes in composition of cargoes or passengers carried, availability of commercial shipping, and limitations imposed upon the use of Government and commercial vessels.

In addition, the Comptroller and the Heads of the Operating Divisions may also present a "special situation" analysis. This normally involves the presentation, analysis and discussion of an appropriate special situation. An example of such a "special situation" is the detailed analysis of the performance by the commands in controlling ship overtime costs. These costs are substantial, amounting to almost $10 million each year. At the area commands, ship overtime costs are closely controlled through the operation of Overtime Review Boards. These boards examine overtime costs upon the completion of each voyage, and may call upon the Ship's Master to appear before it in person and account for questionable or excessive costs.

Analyses of variances in revenue, expressed in terms of revenue per dollar of expense, and of cost, expressed in terms of unit cost per workload mile, are made. They serve to highlight problem areas and aid in the formulation of policy necessary to maintain efficiency and economy of operation under the frequently changing conditions of a dynamic operation.

It appears appropriate at this point to cite a specific example of financial management at work in MSTS. Because of a lack of capability on the part of commercial steamship operations to transport the large numbers of military and civilian personnel of the Department of Defense, especially troops, MSTS operates a fleet of more than 50 government-owned passenger ships. These ships are especially configurated to transport large numbers of enlisted military personnel in "troop" accomodations. Following the end of hostilities and the return of United Nations troops from Korea, MSTS was faced with declining troop passenger requirements and a fixed capability. The problem was that of reducing costs during periods of reduced traffic requirements without reducing adequate shipping capability to meet unanticipated and sudden increased requirements. The problem was promptly and effectively solved through the teamwork of the MSTS staff. A procedure for berthing of ships with minimum crews necessary to maintain the ships in such condition as to resume full operational status upon short notice was developed. A comprehensive analysis was made of the cost of this procedure under varying conditions of reduced operating status. Adoption of this policy of placing ships in a reduced operating status when capability is in excess to MSTS needs resulted in a total saving of about $5,000,000 during fiscal year 1955.

Noteworthy as this saving was, the search for further savings continued. In fiscal year 1957, an even more economical procedure was developed in laying-up surplus capability. Ships in reduced operating status are nested together in a "ready reserve" status with all but one ship being without crew, steam or electricity. One ship with a skeleton crew maintains the entire nest of ships. During fiscal year 1957 this improved procedure represented a saving of almost $2,000,000 from the cost of maintaining ships in just a reduced operating status.

As the coordinating force for financial management at MSTS, COMSTS maintains a continuing program of review and analysis of financial activities. A similar program is conducted by the Commanders at the subordinate commands. Monthly reports presenting the results of the monthly review and analysis program at the command level are submitted to COMSTS at headquarters.

Also, the Comptroller at MSTS maintains a program for the development of standard costs. Standard costs serve as a basis for estimating the profitability of ship voyages prior to their sailing and for evaluating actual performance upon completion of the voyage. This type of "pro-forma" and "post-facto" analysis materially contributes toward savings in MSTS operations and promotes maximum efficiency and economy of operation.

With the aid of standard costs, the Comptroller is developing a series of analyses and charts reflecting break-even operations and estimated profits or losses at varying levels of workload. Actual performance is plotted against estimated revenues and costs at the level of actual workload performed. Analyses are made of the variances in both revenues and costs depicted on the break-even chart. This form of break-even analysis is developed for individual ship types over different routes, graphically

illustrating the relative economy of one ship type over another on a given route at different workload levels.

It is believed that the advantages of Industrial Fund financing, together with the flexibility of management that goes with a freedom from the limitations inherent in annual appropriations, and their effective application via financial management in MSTS, must be credited with a large portion of the savings effected by MSTS. These savings are in turn passed on to the MSTS customer agencies of the Department of Defense. COMSTS is confident that the worldwide ocean transportation requirements of the Department of Defense are being performed at minimum cost.

!! NOTICE !!

! ALL MEMBERS OF ASMC !

Admiral Clexton urges YOU to send in

YOUR ARTICLE

For YOUR NATIONAL JOURNAL

"THE ARMED FORCES COMPTROLLER"

AVOIDING SOME STATISTICAL PITFALLS

Theodore E. Whiting, Chief Statistics Division
Office, Director of Progress and Statistical Reporting
Office of Comptroller of the Army

One of the most difficult problems of the statistical analyst is to see to it that his statistics tell their story accurately and precisely. This problem is becoming increasingly important in this period of retrenchment and change when there is a continuing demand for new statistical data upon which to base decisions, actions and policies.

There are many pitfalls in the final presentation of statistics to the user. This is especially true if the user is trying to solve a new or unfamiliar problem, or if he uses statistics only occasionally. The Office, Director of Progress and Statistical Reporting, of the Office of the Comptroller of the Army has taken certain steps with a view to avoiding some of these difficulties.

Standard Computation of Rates

One problem that plagued Army commands for years was the lack of uniformity in rates used to measure such things as AWOL, reenlistments, and courts-martial. Many commanders wished to see comparisons of the rates for their commands with those of other commands but their statisticians were unable to do this satisfactorily.

AWOL was a good example. In making their computations some commands used the numbers going AWOL during a period, some the number in AWOL status at the end of the month, others the number of man-days lost due to AWOL. Some used total strength, some enlisted strength; some used end-of-month strength, others some sort of average strength. There were other variations; and usually no full description of the basis was given.

In order to remedy this situation, Statistics Division, ODPSR, prepared a new Army Regulation (AR 325-10, 23 August 1956) on the standard computation of rates. This regulation established general procedures for the formulation of rates and the selection of data for rate computations. It established standards for the description of rates, when used in presentations and publications; and prescribed standard rate titles, descriptions, formulas, and sources for the computation of rates in common use.

The regulation also contains a standard method for computing average strength for a month, a quarter and a year. Many offices had been using initial and end strengths to obtain monthly averages but had followed inconsistent methods to arrive at quarterly or annual averages.

It is believed that the use of these standard formulas, descriptions and sources has helped to prevent misinterpretations of data, facilitate comparisons and assure better evaluation of progress and performance.

Standards of Presentation

Statistics Division also has been attempting to revise the manual, Standards of Presentation, prepared by Army Service Forces during WW II, and long out of print. This publication is designed to help in establishing a more accurate, precise communication of statistical information from the analyst to user.

The Graphic Presentation chapter of the new manual called Standards of Statistical Presentation has been distributed to all Army commands. The remaining chapters are in varying stages of preparation.

Clearance of Statistical Material

A third and more direct technique for improving statistical accuracy and consistency is the review of all statistical material by a statistical office prior to its release to outside agencies. The Department of the Army Headquarters established a clearance procedure of this type in 1950. The current directive is Department of the Army Memorandum 360-3, dated 5 December 1956, which is administered by the Statistics Division.

The requirement that all statistical material prepared by any Department of the Army agency for release outside the Army Establishment will be cleared, other than for security, through the Office of the Comptroller was established as a result of an interesting incident. The day before the "Semi-annual Report of the Secretary of the Army" was to be submitted to the printer, a statistician in OSD discovered that all of the military personnel figures in this report were in error. It was later found that the error arose because a reserve officer on temporary active duty had written this section of the report before the end of the fiscal year using rough

estimates of year-end strength. These had not been replaced by actual figures. When this fact became known, the Comptroller, the Vice Chief of Staff and the Assistant Secretary of the Army (General Management) personally and emphatically agreed that the Office of the Comptroller must clear all outgoing statistics in the future.

In the years since 1950, between 20 and 25 per cent of all papers transmitted to this office for statistical clearance have been revised as a result of the clearance review. The number of papers handled has been increasing rapidly.

Much of the material submitted for clearance relates to Congressional Appropriation Hearings. Tables and analyses prepared in advance, as well as prepared statements entered as testimony, verbatim transcripts of the Hearings themselves and replies to Committee questions are reviewed by Statistics Division before they are released. The material transmitted for clearance also includes speeches made by the Secretary of the Army and his Assistants, the Chief of Staff and other key Army personnel; and many diverse studies and communications addressed to higher authority.

Both recurring and one-time reports are submitted for clearance. Certain recurring reports, however, that are found to be consistently accurate and clearly presented are granted automatic clearance. Such reports are released directly by preparing agencies and copies are transmitted to Statistics Division for record and post-audit.

The papers that have been given statistical clearance form an important part of the statistical library which the Division maintains. This library is useful not only as a reference for clearance actions, but also for answering inquiries and for use in the preparation of special statistical studies and analyses. Most inquiries received by the Division, however, are referred to other staff agencies which have far more detailed information and larger staffs which produce the vast bulk of statistics required by outside agencies.

Regulations on standard computations of rates, presentation manuals and statistical clearance systems do not in themselves assure accurate statistics. Much depends on the care, judgment and skill of the designers of statistical forms and procedures, the reports control officers, and the people who prepare the basic records and compile and process the original data.

FINANCIAL MANAGEMENT MOVES FORWARD IN BUREAU OF ORDNANCE

W. S. Williams, Comptroller
Bureau of Ordnance, Department of the Navy

Change is universally resisted. When change is believed to include controls and other personal restrictions, the resistance is even more positive. Such resistance has often been the lot of "Comptrollership" since it merged as a formal entity within government in the last decade. Based on industrial experience it would appear that the formulation of a financial staff to provide a firm basis for management control would be welcomed. The importance of such a staff has been well documented especially in connection with growing business. In considering decentralization Peter Drucker states, "You can't decentralize without very much better control of performance, very much better control of objectives than most businesses have heard of. Decentralization means that you set up a unit autonomously in such a manner that it operates against standards, objectives, and goals rather than against supervision. The major problem is a control problem which very few businesses understand or have controls for".

The post Korean period in the military establishment has been one of improved industrial management. BuOrd with a large diversified establishment of nearly 100 units, a capital investment of $7.5 billion and an annual sales budget of one billion dollars has kept pace with trend. Planning and control systems for its decentralized organization have been strengthened. The Bureau knows that control is not by itself a hindrance to individual freedom. It is rather a prerequisite to decentralization without which there can be no real freedom. Well rests the executive who has delegated authority and commensurate responsibility to his subordinates if he knows that their mistakes will be detected before irreparable damage results.

BuOrd has a continuous management improvement program. The program is a collective effort of all divisions of the Bureau and it is in this environment that comptrollership has won a respected position. The Financial Division has sponsored a tight work plan, regular reporting of operations, the ability to take corrective action, and the facility to modify the basic plan. For the purpose of this article four specific areas of management improvement in which the Financial Division has played a key role will be considered in detail. These are: (a) total systems improvement, (b) top management reporting, (c) communications both vertical and lateral, and(d) the development of a management philosophy on the use of resources.

Total Systems Improvement

The keystones of our systems improvement have been changes in the Bureau's basic budget structure. Through effective leadership and by continually soliciting participation throughout the Bureau in both budget formulation and execution the budget is now recognized as a Bureau budget — the product of all and the responsibility of all. The budget is better balanced, priority programs are recognized, and it is more readily justified. It has also been possible to purify the appropriations of the Bureau thus making them more manageable.

At this time the basic financial structure of the Bureau is being mechanized. Considering the new double entry accounting system and newly imposed expenditure controls it has been necessary to mechanize to provide timely and complete reporting. This effort which is far from complete has already required a number of man-months. We are geared to obligation accounting and a control of operations by expenditure is completely foreign to our experience. Mechanization is producing weekly reports on fund availability and monthly status of funds and expenditure reporting. Further, such a coordinated effort on a Bureau basis will alleviate the necessity for line divisions to maintain parallel financial records. The system can likewise be adapted to include performance reporting as well as manpower and dollar planning and experience. This state will not be achieved overnight since comptroller organizations in the military establishment have in general failed to sell their programs. They have often failed to provide for and to demonstrate the value of top management reporting. Too large a segment of the line still considers the comptroller as "pay" or the "bookkeeper". Financial reporting and analysis is a key to management control since it considers the use of total resources. Through this tool comptrollership provides management with the assurance of good performance, a warning that things are not going as planned, and a yardstick to evaluate the success of the operating team.

In the area of field systems improvement two major programs have been in operation for over a year in which the Financial Division has participated. One is a plan for production improvement and the other is in the area of reports management. Both programs are a joint effort

of interested divisions who, recognizing a need for immediate action, constituted themselves into a committee of the whole to give leadership and support to the field establishment in these areas.

After taking stock of sporadic improvements underway, a plan was formulated to install tailor-made production planning and control systems in ammunition depots and production plants. A team of Division Directors made a preliminary survey of each installation to be included in the program the conclusion of which was a planning session with top station personnel to develop a specific program. The core of the program has been ten specific elements as follows:

Methods Engineering
Production Equipment
Plant Layout
Production Planning and Control Systems*
Process Control
Reports to Management*
Organization*
Training*
Supporting Operations
Engineered Time Standards

(The elements "*'d" are those in which the Financial Division has a specific interest.)

After each program was firmed up an Ad Hoc Committee was appointed from headquarters to assist each station with its specific problems. The programs are designed to improve work efficiency with a corresponding saving in operating costs. The Comptroller of each station maintains appropriate accounts and provides each level of management with integrated financial and production reports tailored to its specific requirement. Over-all reports to top management are supported by analysis. When fully functioning, this financial reporting and analysis program will provide for management the basis for effective management control.

Under leadership of a steering committee of Division Directors, working committees are well into the second year of a program to establish a streamlined reporting system for the Bureau. Since a majority of reports cover the use of and accounting for resources BuOrd Comptrollers have been most interested in the genesis and conduct of the program. The approach used by the first working committee was to consider the station as a basic unit with commensurate authority and responsibility. This effort was planned as a detached, objective study, the type we seldom have time to consider. Out of this effort outlines were developed for a reporting model in fields studied (Research and Development, Finance, Manpower, Maintenance, Supply, and Material Inspection).

The current year's program, while in the main compatible with the first, is directing equal effort toward improving the current reporting system. As the Bureau's reporting requirements from the field establishment are reviewed, the possibilities for elimination, consolidation or modification of reports become evident. Through following each report from inception to ultimate use with the reporting model in mind the end product will be a consolidated, balanced system useful in management control. In the Comptroller's organization we have felt the need of this for some time. Even today's data are not consistent between the several divisions of the Bureau, however, the reports improvement program is already demonstrating that seemingly unrelated data can be integrated to provide a background for appraisal of total performance.

Top Management Reporting

What is the most effective single report the Comptroller can provide to management for the over-all evaluation of Bureau performance? Considering the nature of our appropriation structure it was decided that a monthly report would be most effective. The report, "Where Do We Stand?" has been issued since August 1956. As a prime medium for financial communication it has fulfilled a very real need in the Bureau. "Where Do We Stand?" is divided into the following sections:

Section 1. Current Year Funds
Section 2. Expenditures
Section 3. Operations
Section 4. Budget Calendar
Section 5. Special Studies

Section 1 includes current funding plans and progress against total apportionment and a cumulative quarterly obligation plan. Cumulative commitments and obligations are also shown. The charts (See Following Illustration No. 1) are supported by sufficient narrative to explain deviations from plan, changes in plan, and other variables which will provide a basis for corrective action. The Financial Management responsibilities for unobligated funds (See Illustration No. 2) is shown in bar chart form. Seven classifications are covered including: unallotted; uncommitted allotments; station commitments; project order commitments; M.I.P.R., requisition, etc., commitments; contract commitments at contractor; and contract commitments in BuOrd. This spread is sufficiently definitive that responsibility for unobligated balances and progress toward obligation

is readily apparent. Data are furnished by appropriation and subhead for both service and customer accounts.

Section 2 was planned to build a knowledge of expenditure transactions. We expected to portray carryover of unexpended balances, new obligations, expenditures by program year, and trends in unexpended balances. The implementation of expenditure controls in late F.Y. 1957 brought this section to the fore. It has been modified for 1958 to include accumulated monthly expenditure estimates, actual monthly expenditures and the accumulative difference from the estimate. (See Illustration No. 3)

Section 3, Operations. Here direct costs (labor and material) and indirect costs (indirect labor and other costs) are compared monthly. The data are segregated by type of station for comparison. Total field and total departmental charts compare actual and planned employment.

Section 4 is unique in that it includes a current month's budget calendar and a projected schedule for the next several months. This makes a very handy reference for planning. A budget history by appropriation covering three fiscal years contains all actions affecting the dollar total of the Bureau's budget from initial estimates to initial apportionment.

The concluding section of "Where Do We Stand?" is a short special study which is timely and of general interest. These studies are designed to stimulate an interest in financial problems.

The size of "Where Do We Stand?" is controlled to insure readability. It is directed to the top management level and is supplemented by additional data for the several program levels within the Bureau. To supplement this report a weekly "Comptroller Brief" is issued to cover important changes in fund availability, controls applied by review levels and any other major financial item. The report is limited to two pages.

Communication and the Development of a Philosophy on Resource Conservation

The remaining two areas, namely, communications and the development of a management philosophy on the use of resources, will be considered as a unit. The new graduate brings to an assignment technical skill and enthusiasm. As he matures technical skill is paralleled by an equally important skill — human skill. Here we simply mean the ability to work with, and the ability to lead and follow our fellow associates — in other words, team play. These skills equate at the Branch level only to be displaced by the ultimate skill — conceptual — at the top management levels. It is this ability to see the operation in complete perspective, ability to balance equitably the forces of the total environment that stands out at the pinnacle of management. As we gain proficiency in viewing the organization as one unit each functional area falls into its proper place. In the Financial Division we have sponsored and supported activity to develop conceptual skill at both field and headquarters levels. Included in our program have been Comptroller Seminars — general staff seminars — by category of station (where representatives from stations with similar missions attend), special seminars on internal control, and selected training programs in the use of financial tools as a basis for management decision. The Bureau has used other complementary media toward the accomplishment of this goal.

In the Financial Division we find regular reporting to the line and a systematic review of the financial program with Branch and Division leadership has gone far to eliminate general opposition to Comptrollership and the common accusation of interference in program execution. Once a budget becomes everyone's budget and the problem of compliance with its limitations becomes everyone's problem we have effective communication. We also gain an understanding of the true and relative values of our resources. They become as our own and we husband them in a judicious manner. The Bureau has not reached the point of, nor will it with a constantly changing leadership for some time, where financial management is accepted into full fellowship with the line divisions. However, uniform reporting and full participation have gone far to make an otherwise untenable situation workable. We continually stress the Bureau as a unit and take pride and pleasure in its accomplishments knowing that we have borne our share of its load.

PROCUREMENT OF ORDNANCE AND AMMUNITION, NAVY, FY 1957 PROGRAM

Total "Bureau" Apportionment

1. The recent DOD reduction of $19.5 million has created a complicated picture of what we must and what we cannot do with POAN for the remainder of the year. It has only recently been ascertained that the cut in POAN does not come out of our apportionment, but is a sum of money that we are required to show as an unobligated, uncommitted balance at the close of the fiscal year. Since we wish to maintain our program for that money, arrangements are being made to insure that a maximum amount of procurement paper, short of commitment, will be working at the close of the fiscal year. A financial action is in process to restore to program accounts money which was removed when it appeared that the DOD cut would result in reduced apportionment. In addition a careful analysis of obligations in hand and in process beyond the Bureau's control is underway to determine how many more contracts Co may obligate. In this manner the Bureau hopes to achieve, but not exceed, its full obligation authorization. A further control will be established in the Financial division to facilitate full use of the commitment ceiling allowed to POAN, while insuring that we do not exceed our limit. This will allow us to work at full speed, with the optimum use of the $19.5 million to cover program that falls beyond the DOD-imposed ceiling.

2. To gain the optimum use of funds, progress in the BuOrd POAN accounts should be measured in terms of both prior year and current year availabilities. This is particularily difficult in that the Bureau's accounting system is not geared to separate the Bureau and Customer obligations and commitments in the prior year accounts, although we receive a distinct and separate apportionment for each. However, at this time indications are that virtually all of the prior year customer funds are obligated permitting the Bureau's POAN programs greater leeway in arriving at our obligation ceiling. Our current POAN status is as follows:

(In Millions of Dollars)

	Apportioned Available (1)	DOD Plan Avail for Oblig & Commit (2)	DOD Plan Avail for Obligation (3)	Oblig. (4)	Comit. Comit Allot (5)	Unobl.* Allot. (6)	Reser. (7)	Bal. (8)
Current year "Bureau"	327,274			242,939	39,277	13,845*	24,543	7,668
Prior year "Bureau"	34,600			25,062	3,286	1,169*	-0-	5,083
Total "Bureau"	361,874	342,374	300,500	268,001	42,563	15,014*	24,543	12,751

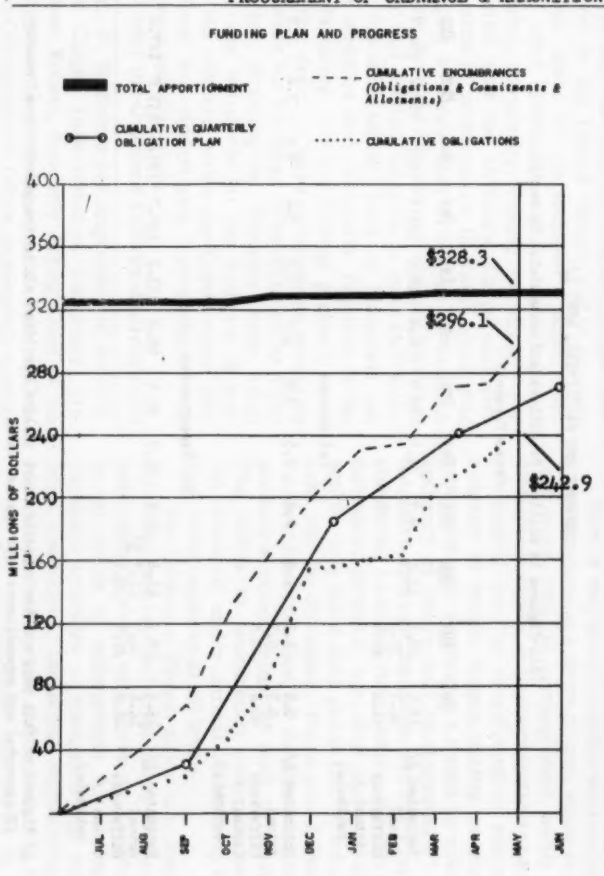
* Officially, allotments are not considered as encumbrances until obligations against them are reported. Therefore only that portion which will be obligated through 30 Jun 1957 (Currently estimated at $10.9 million) will be considered as part of DOD Financial plan ceilings.

Illustration 1

COMPTROLLER REPORT CHART
NAVORD FORM 2699 (Rev. 10-56)

PROCUREMENT OF ORDNANCE & AMMUNITION, NAVY, 1957 - TOTAL "BUREAU" APPORTIONMENT

As of:
6/ 7/57 IBM Run
1/18/57 Oblig. Plan



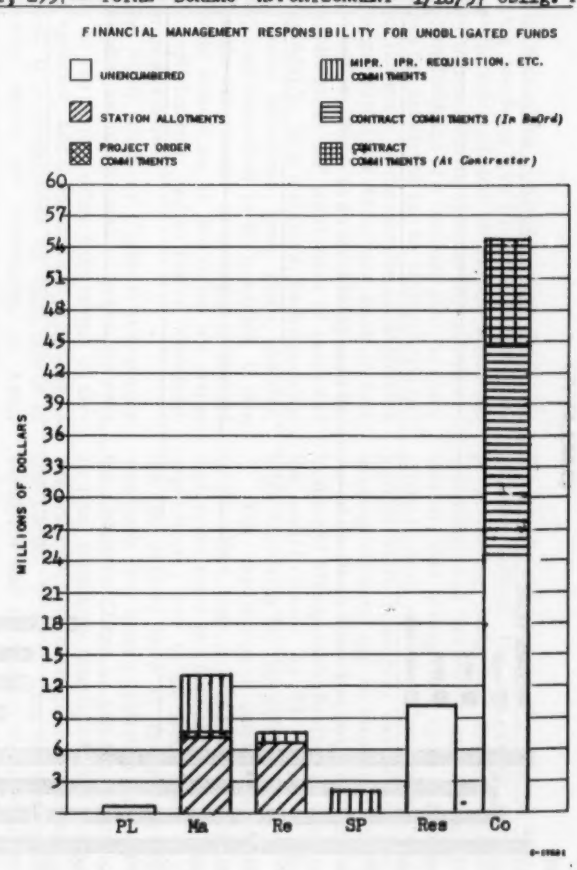
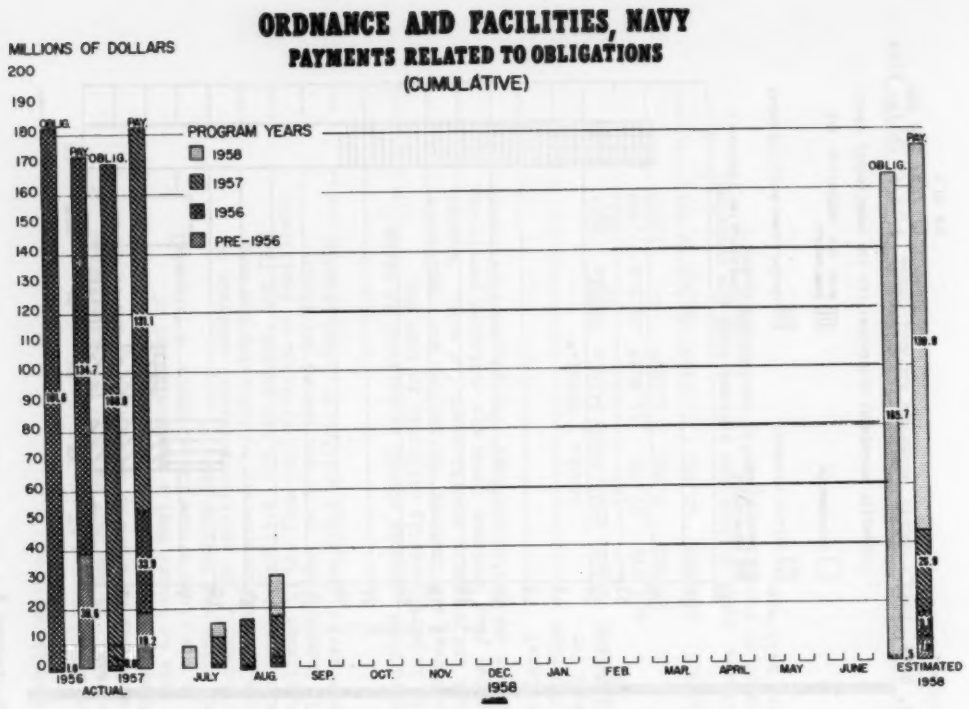


Illustration 2



ORDNANCE AND FACILITIES, NAVY 1/

(All figures in millions of dollars and accumulated by month)

Gross Payments

	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
Estimated 2/	15.9	29.5	43.1	59.7	74.5	88.8	102.8	116.3	131.1	145.9	160.2	174.7
Actual	14.7	31.4										
Difference (Actual ≠ estimate)	-1.2	≠1.9										

Collections

Estimated 2/	0.7	1.3	1.5	2.2	3.5	3.8	4.6	5.1	5.4	6.9	7.2	7.7
Actual	0.3	0.7										
Difference (Actual ≠ estimate)	-0.4	-0.6										

Net Expenditures

Estimated 2/	15.2	28.2	41.6	57.5	71.0	85.0	98.2	111.2	125.7	139.0	153.0	167.0
Actual	14.4	30.7	41.7 3/									
Difference (Actual ≠ estimate)	-0.8	≠2.5	≠0.1									

1/ Figures on this page and the opposite chart include certified claims transferred from Treasury (M accounts) and expenditures made against them.

2/ Submitted to NAVCOMPT on 13 Aug 1957 (Revised 17 Sep 1957).

3/ Preliminary actual from NRAO cycle report (includes $1.0 million from Navy Stock Fund).

Illustration 3

PERFORMANCE STANDARDS IN THE ORDNANCE CORPS

W. W. Storey and N. Kobert*

The successful accomplishment of any undertaking involving two or more persons requires the establishment of certain standards in order that coordination may be effected toward the accomplishment of a common goal. In many instances the standards can be most general and flexible. However, as the mission and objectives of the organization become larger, and therefore more complex, there is an increasing need for the establishment and publication of more and more standards. As a minimum, such standards should cover objectives, time, place, quantity, quality, and resources to be expended. In this manner the commander or manager is enabled to provide resources, to determine the status of accomplishments, and to better coordinate the common endeavor.

The Army Ordnance Corps is responsible for providing arms, ammunition and implements of war to the Army, other Department of Defense agencies, and to foreign aid programs as assigned. It is responsible for huge stores of armaments which are maintained at Army depots; it is responsible for operating over one hundred installations in the United States; it employs over one hundred thousand civilian employees in the United States; and it expends a large share of the taxpayer's dollar each fiscal year. Obviously, with a responsibility of this size, complexity, variety and scope, it is essential that the Ordnance Corps establish standards of performance in many areas. For example, military characteristics of weapons indicate the need for drawings and specifications which will produce weapons to meet such military characteristics. Bills of Materials set forth supplies and materials required in the manufacturing and assembling process; construction drawings and specifications prescribe standards for buildings to be occupied by Army agencies, including the Ordnance Corps. All of these are standards for the guidance of responsible officers within the Corps which may be used for determining conformance with missions and objectives.

Under the Ordnance Command Management System the management of resources is accomplished through the integration of planning, programming, budgeting, funding, accounting, reporting, and reviewing and analyzing. Obviously, this management cycle is best accomplished where standards have been established against which resources can be provided, and accomplishments can be measured. Therefore, one of the most important parts of the Ordnance Command Management System at this time is the establishment, by 31 December 1959, of labor standards for measurable areas.

The importance of establishing standards in the labor area is best pointed up by the fact that some sixty per cent of the Corps' internal expenditures are in the labor area. It should not be implied here by the reader that no standards have been established for labor within the Ordnance Corps — just the reverse of this is true. Standards (statistical and engineered) are in effect in most labor areas throughout the Corps. It is to firm up such statistical standards and to engineer them, where practicable, that is to be accomplished by 31 December 1959.

Here it may be well to define what a standard is: A standard is a norm or goal which is to be conformed with or accomplished within predetermined limits. A standard dictionary defines a standard as: "an established or authorized measure of weight, length, quality, or the like, especially one serving as a model by which the accuracy of others may be determined". It is therefore apparent that there are many types of standards, including time, quality, quantity, performance, personal, etc. For purposes of this article, only labor time and performance standards will be discussed. These are defined as: "a criteria expressed as the time required to produce a given amount of work or product". The ability to consistently meet and surpass the standard, under normal conditions, is the goal of management at all levels.

The Ordnance Corps policy is to establish the most accurate and economical standards of performance which will serve as a useful tool at all levels of management in all types of Ordnance activities — manufacturing, rebuild, depot operations, industrial engineering, research and development, administrative, etc.

At the present time, this policy is being implemented within the Ordnance Command Management System.

* Mr. W. W. Storey is Comptroller of the Ordnance Corps, Department of the Army. Mr. Norman Kobert, formerly Acting Chief of the Management Engineering Services Branch, Ordnance Comptroller's Office, is presently Assistant Director, Management Center, Marquette University.

The following are examples of the many ways management can be served through the use of work measurement to establish standards of performance:

(1) To evaluate individual operator performance and thus provide a basis for determining efficiency ratings.

(2) To determine standard costs of direct and indirect labor by determining the product cost at standard performance.

(3) To establish proper machine feeds and speeds as well as determine the most efficient product material to be utilized.

(4) To set productive schedules of activity through the technique usually termed "production control."

(5) To balance production lines or groups of people performing coincident work. This involves the equalizing of individual operations comprising group effort, to attain at least the minimum potential output of a given product through the re-allocation of individual duties.

(6) To compare work methods for selection of the "better way".

(7) To determine operating effectiveness (performance) as a ratio of what "should be done" (standard) against what "has been done" (actual).

(8) To ascertain the number of machines (production or clerical) a person or group of people may use simultaneously.

(9) To indicate areas where methods improvement will be installed to achieve the best overall operating advantages. This use gains the most benefit in analyzing crew activities and in balancing production lines.

(10) To determine equipment and labor requirements for the planning of manufacturing, transporting, storing and clerical type activities.

(11) To estimate machine requirements for procurement of new or remodeled equipment.

(12) To evaluate methods improvements.

(13) To provide an accepted basis for the establishment of a wage incentive system.

(14) To indicate the need for training programs by pointing up inefficient methods or lack of method.

(15) To evaluate the results of training programs.

(16) To evaluate employee suggestions.

(17) To determine organizational objectives, in order to indicate and appraise supervisory performance.

(18) To set work objectives for operating labor.

(19) To aid in equipment location for proper planning and office layout.

(20) To evaluate the design of clerical and production reporting forms.

(21) To determine the amount of personal "break" time an installation should permit and the optimum times of day for these "breaks".

(22) To redistribute portions of work of a lower skill level than the job description demands for the equivalent pay.

(23) To evaluate the procedural flow.

(24) To aid in product design by aiding in the choice of methods, materials, skills and equipment necessary to produce the same or equivalent product.

(25) To aid in the preparation of an operating budget through more accurate cost estimating.

(26) To provide basic data for human engineering studies.

(27) To determine optimum physical working conditions.

(28) To determine the skill level inherent in a given operation for selection of personnel to perform that operation.

(29) To indicate the applicability as well as the economic feasibility of automation innovations.

(30) To eliminate or reduce (through the determination and identification of its extent) the amount of non-productive time inherent in an operation.

(31) To determine methods design for optimum conditions of safety.

(32) To evaluate contractor performance.

(33) As a basis of prior knowledge for reasonable bid levels and negotiation of contracts.

(34) To determine and maintain data for industrial mobilization.

(35) As a source of basic data for applications of mathematical (linear) programming techniques.

(36) To determine optimum quality levels at the least cost.

(37) As a tool for determining the validity of employee grievances (industrial relations).

(38) As an aid to decreasing storage costs (inventory) through the proper scheduling of shipments and receipts keyed to production levels.

(39) As a source of basic data for component "lead-time" or "line-of-balance" charting (Optimum time and quantity of procurements).

When we discuss standards setting, no doubt a majority of people think of a man with a stop-watch clocking an operation. This is not necessarily so, since there are quite a few other methods of setting a standard (Chart #1).

To facilitate the accomplishment of the Ordnance Standards Program, specialized training in this subject is conducted by the Ordnance

TYPES OF STANDARDS

TYPE	METHOD DESCRIPTION	RATING	ALLOWANCES	PRODUCTIVE FROM NON-PRODUCTIVE
TIME STUDY	THERBLIG L&R HAND	OBJECTIVE	ALL EXTERNAL FACTORS	YES
PRE DETERMINED TIMES	SAME	SAME	SAME	YES
ELEMENTAL STANDARD DATA (BASED ON ABOVE)	SAME	SAME	SAME	YES
NON REPET-ITIVE TIME STUDY (LONG IRREG CYCLES)	NARRATIVE DETAILED	SUBJECTIVE	SAME	YES
WORK SAMPLING (WORK CATEGORIES)	NARRATIVE GROSS	NONE	INCLUDED IN TIME	YES
HISTORICAL	PROCEDURES ROUTE SHEETS FUNCTIONAL STATEMENTS	NONE	SAME	NO

CHART 1

Corps. Since 1953 the Ordnance Management Engineering Training School at Rock Island, Illinois, popularly known as OMETP (Ordnance Management Engineering Training Program) has trained more than 650 Ordnance people, including many from other Department of the Army Technical Services. Similar training has been furnished to the Department of the Navy, the Department of the Air Force and other Federal agencies.

Offered at OMETP, are courses in "Work Methods and Standards for Methods and Standards Technicians"; "Work Methods and Standards for Supervisors of Methods and Standards Groups"; "Work Methods and Standards Appreciation"; "Standard Time Data"; and "Advanced Work Measurement Seminar". These courses range from one week's duration to four weeks duration, 40 hours per week, 5 days a week. The basic purpose of these courses is to provide knowledge of and develop skills required to establish standards of performance for various work areas. The appreciation course in Work Methods and Standards serves primarily to familiarize and orient trainee; the Supervisors Course serves to equip supervisors to plan and operate such programs; while the Technicians Course assures detailed and comprehensive training in techniques to analyze methods and measure work. The Standard Time Data Course covers intensive re-orientation in the Ordnance Predetermined Approximate Performance Time System; development of elemental standard data under shop conditions; introduction to concept of standard times for machining, including consideration of feeds and speeds; development of the standard practice sheet; the development of the job standard sheet, etc.

In the Advanced Work Measurement Seminar, the objective is to provide a more thorough knowledge and development of skills required to solve specific problems arising at the installation level during the establishment of engineered standards of performance.

The OMETP method of approach, while varying with courses, basically consists of readings, active enrolled participation, with questions and opinions being encouraged with a view towards bringing to light varying viewpoints and thus providing students a broader approach to their problems. And, realism is attained at OMETP through actual studies made in the shops and offices at the Ordnance Rock Island Arsenal.

The Standards Program in the Corps is an additional management engineering technique to serve commanders by profiding incormation required to assure better management. Through the development and utilization of standards and other management devices, the Ordnance Corps continues to fulfill its public trust in achieving maximum operational effectiveness and efficiency.

The increasing importance of establishing performance standards is highlighted by the ever increasing tax burden required to support our national defense. The establishment of standards facilitates the decentralization of authority to act within prescribed limits; reduces workload at the Seat of Government; and places decision-making at a level where facts and circumstances are more abundant and in proper perspective. It therefore becomes apparent to the manager and commander that the most effective and efficient management of resources, including men, money, materials, facilities and intellectual property, is facilitated by having predetermined standards of performance, and using them.

The Ordnance Corps has met this challenge by establishing 31 December 1959 as a target date for accomplishment of its "Labor Standards Program". By using standards of performance, the manager or commander and his staff are better able to determine when, where and how resources should be acquired, utilized, and disposed of on the most advantageous basis to the Government. This, obviously, is a "standard" or "goal" for all who are charged with the custody or management of Government property and other resources.

MACHINE ACCOUNTING AT A NAVAL INDUSTRIAL ORDNANCE PLANT

Charles W. Mowrey, Comptroller
Naval Ordnance Plant,
York, Pennsylvania

The Naval Ordnance Plant at York, Pennsylvania, has as its operating mission, the design, development, overhaul, and manufacture of ordnance equipment for the Navy Department. Part of the staff and service support for this operation and other segments of management is the responsibility of the Comptroller Department. The utilization and management of the punched card accounting equipment is a function assigned to this department.

Since 1949 the accounting function has been the primary requirement for punched cards. Therefore, organizationally, the electric accounting machine installation was established at a branch level within the accounting and disbursing division of the department and given the title "Machine Records Branch". The Machine Records Branch was composed of a personnel complement of five. This staff was specifically charged with the processing and completion of plant payrolls, the preparation of various types of labor and material cost distribution tabulations, fund control analyses, and innumerable "feeder reports" required to furnish general accounting, information concerned with subsidiary and general ledgers. The nature of work at the Naval Ordnance Plant requires the use of a job order accounting system to price the end product, control production costs, and identify work load and production data. Therefore, since the inception of punched card accounting in 1949, job order reports also have been significant to our cost accounting responsibilities.

The electric accounting machine program has followed generally the above description, with the exception of modification and improvements made to the existing accounting system which required procedural refinement in the punched card area. However, early in 1956 the Bureau of Ordnance and the Plant Management initiated a study to develop an improved production control system, and a production scheduling procedure; these to be correlated into a new and revised financial management and control program. Objectives to be realized included a more effective utilization of manpower, assurance of meeting scheduled deliveries, simplification of existing procedures, and the maximum utilization of the electrical accounting machine equipment in order to eliminate clerical and record keeping functions.

Primarily, it was decided to expand the punched card system for the proposed integrated financial and production control procedures. This, of course, required more equipment, revised functional and personnel organization charts, new procedures, new forms, training, etc. After a rough draft of the plans which included a daily reporting medium (to be described later) and the many products resulting from this system, it was obvious what type of conventional punched card equipment would be required and what kind of an organization would be the most feasible to operate it.

The Machine Records Branch was redesignated as a divisional function because of the broad scope of its proposed duties. It has now been named the Data Processing Division of the Comptroller Department, containing two branches - a planning branch and an operations branch. The planning branch develops, revises, and test procedures; while the operations branch is responsible for processing the records and producing the data, reports, and analyses. The supervisors of each branch report to a divisional head who, in addition to managing the division, has been named chairman of a station data processing group. The interest of this group is aimed at a continual review of plant operations in order to apply machine accounting methods where economical and effective. The group's duties include a constant review of modern data processing equipment and its applicability to plant procedures.

The results of the procedural development placed into effect, through recommendations of the Station, Bureau of Ordnance, and the Management Committee included the following:

(1) A revision to the account structure which established additional productive cost centers for more effective control of and equitable distribution of costs. New account numbers in the factory overhead category were also instituted to budget and collect costs for such items as "allowed time away from the job", "standby time", etc.

(2) A job order numbering system which provided a means of accumulating and summarizing production and cost data. Each digit of the numbering system is significant in that it is related and identifies a part of the manufacturing program. For instance, the coded information will identify the type of work, the pro-

duction program, major assembly, component parts, etc.

(3) Initiation of a daily time-labor-distribution card which is completed by each plant employee and serves as the basis for source information pertaining to an employee's attendance and his pay check; work measurement data; production information as to standard hours and pieces completed and spoiled, with coded reasons for not meeting standard time; and the cost distribution of the employee's time. From this source document, detail cards are keypunched and processed to subsequently produce daily, weekly, monthly, and total to date applications.

(4) More meaningful financial reports and accounting applications, some of which are: weekly material cost distribution reports; to date fund control reports by major assembly items; controlled maintenance analyses; monthly plant manufacturing and administrative overhead reports; feeder tabulations for general accounting use; monthly labor, overhead, and material cost reports by major assembly, cost center, and work authorization; and innumerable other job order, and material obligation tabulations.

(5) Expansion of production control reporting to produce from punched card data production workload reports, work area and machine load reports, daily work movement reports, production performance and expenditure reports, material shortage listings, and tabulations which indicate causes for failure to start operations on schedule.

(6) Reporting through the medium of punched cards, monthly and quarterly work measurement statistics, and sick and annual leave time, by cost center and department.

(7) Replacement by machine accounting methods of clerical operations like the preparation of bills of material, job record forms, job order formats, inspection and move tickets, etc. The preparation of job orders is now performed in less time, and in addition, the form contains more information such as a description of the work to be accomplished at each operation, and the total hours required to accomplish the work at each operation.

The expansion of machine accounting applications, described above, will provide sound basis for future workload planning and for corrective action to bring current operating conditions in line with established planning goals. The production control reports are tabulated from detailed punched card data which are accumulated rapidly and summarized for the various levels of management. A more detailed description of a few of the reports might be of interest:

(1) A daily work movement report serves to show the movement of materials by lot between work areas in the production shops and indicates the number of pieces spoiled or held for rework out of each lot. One of the uses of this report is to follow the progress of scheduled operations and adjust future schedules to conform to progress.

(2) Another daily report termed "Production Report" is one available to all levels of shop supervision. Progress of the work in the shop may be followed through this medium. The report is also used to check operational efficiency where standards are applicable.

The progress made so far is the first step in a continuing program to utilize electric accounting machine equipment to better serve management through improved controls, and benefit the Navy and taxpayer through an overall economy of operation. Unlimited future possibilities in this direction can be readily visualized.

NAVY REPORTS MANAGEMENT

Sara B. Motley
Navy Management Office

In a recent Clean-up Campaign, the Navy saved one million three hundred thousand man-hours for other work in taking action on reports and related operations. In addition, about $200,000 were saved in equipment and materials for collecting and preparing the data and processing and using the reports.

Such savings are possible only because of the large expenditure of funds for reporting purposes and is one indication that nearly all phases of policy-making decisions as well as day-to-day operations of military, industrial, and non-industrial functions depend on or are threaded through with the communication of information — or "reports".

The report decided on and furnished may be the key to effectiveness. Reports provide the basis on which policy is formed, decisions are made, specific operations are performed, and performance is controlled, improved, and evaluated.

Therefore, one aim of reports management is to provide management with adequate reporting systems to help determine and perform necessary functions.

Reports Have Hidden Costs

Reporting systems, however, are costly, and individuals or organizations should insure that reports are essential and, in light of changing needs and conditions, continue to serve their needs in the most economical manner.

Studies indicate that the largest part of the total cost of a report is often hidden. The cost of filling out or completing a report form is often small in comparison with the cost of collecting the data, keeping the records, producing the report, and reviewing and processing the information at its destination. A report can often be initiated in a matter of minutes, but it may take thousands upon thousands of man-hours to collect the information to go in the report, and may take many thousand more to use the information furnished on it.

Meaning of Reports Management

Analysis of reports requires a thorough study of organization, workflow, operating policies and program, as well as the methods and procedures needed by the organization whose problems are under study, and the cost of the reports to the organization.

Reports management is not considered the development or examination of "isolated pieces of paper" — the reports themselves — but how they relate to the entire system they support. Reports management is a systems analysis function directed toward insuring the most effective communication of information, reporting systems, and related operations and procedures.

Reports Management Concepts

It is customary to be concerned with content of the report — "What" goes into the report — and for very good reason since this is basic to effective systems. A decision on the mission and the end result to be achieved will govern the kind of data recorded and reported in the system. A determination of the right amount of information being furnished each level is essential — only summary information to top level and only those additional details needed for each lower level — usually referred to as the pyramidal plan, or the small-and-large pipe-line plan.

The Navy program, however, also emphasizes the methods and procedures, aspects — the "how", "where", and "when" factors. In this day and age of electronic, integrated and automated data, "how" the information will be processed is very important. Moreover, often the application of a very simple principle in connection with preparing or processing a report which affects a large number of respondents will yield effective results. The Bureau of Ordnance, for example, saved an estimated 225,000 annual man-hours through revision of the method used in ordnance inventory reporting. Under the former system, each ship and shore activity was required to furnish a complete, manually-prepared inventory report on every item of ordnance material. Under the revised system, the Bureau of Ordnance furnishes an EAM tabulated inventory listing to each vessel and activity. The respondents indicate on the already-prepared lists only changes (additions, deletions, or alterations) and return the list to headquarters. The man-hours formerly expended in preparing a complete, manual report on every item, whether there is a change from a previous report or not, are eliminated. In addition, items on which action is necessary are immediately highlighted to the recipient.

Navy Organization for Formal Reports Management

Experience in the Navy in providing assistance both in developing needed reporting systems and in improving existing ones, indicates the most effective organization for Navy reports management is decentralization of the reports management installation operation to the points where reports and related procedures originate and are used; with provision of a central point for program coordination and technical guidance.

Reports management installations are located in each of the bureaus in the Navy Department, each of the Naval District Headquarters, and larger Naval shore activities and Fleet Commands.

One centralized office, the Navy Management Office in the Executive Office of the Secretary, is responsible for establishing and publishing standards and guides for the function, and exercising technical control of the function throughout the Naval Establishment. In each of the Naval District headquarters, the District Management Assistance Office provides training and technical assistance to all shore activities in their districts on reports management.

At the local level, in the activity operating the program, the reports management installation reviews and assists in developing reports and systems initiated within the activity. In addition, it reviews reports prepared by the activity for higher authority in order to insure effective procedures for preparing the reports and to indicate needs or recommend improvements to the offices which initiated the reports.

Thus, the analyst is operating at the very location where the procedures can actually be observed; the practicability of other methods, equipment, etc., is actually known; and the specific needs and relative costs of the reporting system and related operations can be evaluated first-hand.

As evidence of the practicability of this, during only one year the reporting workload at a Navy Supply Depot was reduced by 37 man-years. Thirty-three man-years were accounted for by efforts of the reports management installation and revisions of local requirements; four man-years by reduction of requirements from outside sources. Some of these savings were accounted for by actions which resulted in large savings station-wide. Others illustrated the results of what we call "chipping away at paperwork" — projects which individually benefitted only small segments of the organization, but aggregated effective man-hour savings and more effective station operation.

"Do-It-Yourself" Approach

Current emphasis includes a "Do-It-Yourself" approach. Techniques of reports management are not esoteric. They are good common sense principles that can be applied not only by special management technicians at a central point in the activity but by the operating personnel themselves.

Although reports management from a central point may be at the optimum point to determine how needs and procedures affect more than one organizational unit, for the development of an integrated system, application of good reporting principles by management and organizational unit members at all levels are important day-to-day responsibilities.

For the do-it-yourself kit, the following are some of the specific types of actions which can be applied in eliminating and improving existing reports and also in the initiation of new reports and procedures to help provide economical and efficient practices.

LOOK AT THE CONTENT AND USE

Is the information you are getting what you need to do your job?

- Do you need . . . more information . . . different information?
- Will its use justify its cost/

Is the right AMOUNT of information being furnished to each level?

- Only summary information to top level?
- And only those additional details needed for each lower level?

Can you eliminate unnecessary REPORT ITEMS or COMPLETE REPORTS? When, for example:

- No definite action is taken or decision made on them?
- The situation which originally required the information has changed . . . or been corrected?
- The information is not pertinent to the the functions or responsibilities of the office?
- The information duplicates data on other reports or records?
  - Use a copy of an existing report instead of requiring a separate one . . .
  - Add items to an existing report to make it or a copy of it serve more than one source . . .
  - Eliminate not only the duplicate reports but also any duplicate operations or functions . . . when the receipt or use of same or similar

reports results from duplicate operations or functions.

ARE YOU GETTING THE MOST OUT OF YOUR SOURCE RECORDS?

- Improve them to facilitate the preparation of reports.
- Rely on or develop them so that they can be used to avoid preparation of a separate report.
  - Arrange for the basic records to be consulted . . . instead of transcribing to a separate report.
  - Furnish a copy of the original record, instead of transcribing the information. (Also avoid the possibility of errors in transcribing . . . time for proofing, reviewing . . ., etc.)
  - Arrange for reproduction instead of transcription . . . (For example, photographic reproduction of visible indexes or files).

CAN YOU MAKE ADMINISTRATIVE IMPROVEMENTS?

- Substitute administrative action or delegate responsibility for taking action . . . in lieu of requiring written reports on problem areas . . . or unsatisfactory conditions?
- Reassign responsibilities for report preparation . . . take advantage of most efficient use of existing source records, collection of the data, etc.?
- When performance of a function . . . and compilation of data necessary to its performance . . . are organizationally separated:

  Transfer either the function of performing the operation or of preparing the data . . . to avoid reporting back and forth?

HAVE YOU USED REPORTING BY EXCEPTION TO THE FULLEST EXTENT?

- Establish standards – (with "plus" or "minus" factors if necessary) and require reports only when operation or performance is above or below the range established.

  (Also highlights immediately areas on which action needs to be taken; avoids burying them in a mass of other data.)
- Report only on changes from previous report in lieu of complete information for every item (e.g., inventory reports).
  - Distribute to preparing activities a copy of the record maintained at the requiring level for notations of changes and return. (For example EAM tabulated listings.)
- Furnish information only on items needing correction or action, instead of detailed information on all conditions (e.g., inspection reports.)

CAN YOU REDUCE NUMBER OF RESPONDENTS? RECIPIENTS?

- Use the sampling technique . . . in lieu of requiring complete information on all items from all possible respondents.
- Reduce numbers of copies of reports prepared or received.
  - Survey recipients for renewed justification of receipt of copies.

REDUCE FREQUENCY OF PREPARATION AND USE

Could you require reports:

- Weekly instead of daily . . . quarterly instead of monthly . . . etc.?
- Only on request . . . instead of at recurring intervals . . . with the understanding that the information will be available if necessary?
- Only on occurrence of a situation or event or a change in a condition?

  (Eliminates NEGATIVE REPORTS when nothing to report has occurred.)

DO YOUR DUE DATES INSURE EQUITABLE WORKLOADS IN PREPARING AND RECEIVING OFFICES?

- Avoid conventional peakloads . . . first of month, last of quarter, etc.
- Stagger due dates to even preparing and using loads.
- Receive information on a cycle basis to even off loads.
- Allow sufficient time between the end of the period covered and the due date . . . for adequate compilation.

IS THE REPORT FORM DESIGN THE MOST EFFECTIVE FOR THE PROCEDURE?

- Are the items located for the
  . . . most efficient use by the receiving or processing offices?
  . . . . easiest completion by the preparing offices?
- Are correct design and spacing provided for most efficient
  . . . manual . . . typewriting . . . business machine . . . or other completion method?
- Are recurring items and data preprinted; only variable information filled in?
- Have the preparation and handling of separate transmittal letters been eliminated by including "to" and "from" information on the report?
- Has the signature line been worded to avoid the requirement that a specific official sign, unless it is absolutely necessary?
- Are filing and reference items positioned for most efficient use?

HAVE YOU COUNTED THE COST?

- Compare the value of the report with the cost in man-hours and materials for its preparation and use.
- Consider the costs for all of the steps involved in the
  . . . collection of the data . . . maintenance of source records
  . . . preparation . . . review
  . . . transmission . . . use . . . temporary housing . . . and final filing or disposition of the report
  . . . and for related documents or procedures used solely in connection with the preparation or processing of the information.

When more than one copy of a report is prepared, there is usually more than one receiving or using office. Costs should be computed on approximately the same factors as for the primary receiving or using office.

DO YOU GET BACK THE INFORMATION YOU WANT?

Insure effective reporting through clear, specific instructions.

- Provide all instructions in a single directive or source as an aid to personnel in preparing the report.
- State clearly the purposes or uses of the data being collected.
  (Helps the preparing office to ensure the data reported will accomplish the objectives intended and to make decisions on doubtful cases.)
- Give clear instructions, interpretable in only one way, on each item to be reported.
- Require submission on a specified form whenever possible. Otherwise, specify the format for the items . . . ensure uniformity in data reported, and simplify transcriptions, comparisons, evaluation, or other use of the data.
- Specify the specific period of time or precise situation to be covered . . . the exact due date or its arrival at its destination . . . and first effective reporting date or period.
- Designate the specific respondents required.
- If applicable, specify whether a negative report is required.
- If practicable, specify the source and recommended procedures for obtaining and compiling the information to ensure comparable data and economical methods.

!! NOTICE !!

!ALL MEMBERS OF ASMC !

Admiral Clexton urges YOU to send in

YOUR ARTICLE

For YOUR NATIONAL JOURNAL

"THE ARMED FORCES COMPTROLLER"

Membership may be held in Local Chapters or in the National Group of Members-at-Large.

GOVERNING BODIES

The American Society of Military Comptrollers is governed by a National Council with National Officers, including a President, Vice Presidents (one from each of the three Military Departments, the Marine Corps, and the Coast Guard), a Secretary, a General Counsel, a Comptroller, and an Executive Director. The Constitution provides that all National Officers, except the Executive Director, shall serve without compensation.

The Constitution provides, also, for an Annual Convention consisting of members of the National Council and representatives of the Local Chapters, with broad powers, including the election of the Members of the National Council and National Officers.

Various Committees are appointed by the National Council.

LOCAL CHAPTERS

The National Council may grant Charters for Local Chapters under the following conditions:

1. There must be at least six petitioners, each of whom is an Active or Life Member, or is eligible for such membership.

2. Such petitioners jointly submit to the National Council a copy of the proposed Chapter Constitution and By-Laws, together with a statement of the geographical area to be served by the Chapter.

3. The National Council approves the petition, and the National Secretary provides for the issuance of the Charter.

ACTIVITIES OF ASMC

The activities of the American Society of Military Comptrollers are directed to the advancement of Military Comptrollership—a member of the management team concerned with maintaining and improving the efficiency and economy of the Armed Forces of the United States.

Activities of ASMC are conducted both at the National and Local Chapter levels—including, for example:

Annual Conventions held for business and social purposes—and for the professional interchange, discussion, and development of Comptrollership Principles and Practices.

Special Conferences and Seminars directed to priority areas in the Comptrollership field.

National Journal of ASMC devoted to the affairs of the organization and to technical matters of direct concern to those engaged in Comptrollership activities throughout the Armed Forces.

Local Chapter Meetings held for professional discussion—including papers and addresses by speakers of outstanding qualifications in Comptrollership.

Chapter Publications giving local news and selected technical materials on Comptrollership.

Extensive correspondence among ASMC members on subjects of primary interest to Military Comptrollers and their Staffs.

Liaison with the counterparts of ASMC in private industry—for example, the Controllers' Congress of N.R.D.G.A., and the Controllers Institute of America.

* * *

For further information call on your nearest Local Chapter, or write to—

NATIONAL COUNCIL
AMERICAN SOCIETY
OF
MILITARY COMPTROLLERS
Post Office Box 1747
Washington 13, D. C.

THE ARMED FORCES COMPTROLLER
Published By
The American Society of Military Comptrollers
Post Office Box 1747
Washington 13, D. C.

Second Class Entry Authorized at
Washington, D. C.

Maurice W. Harrell
3945 Conn. Ave, N.W. Apt 407
Washington 8, D.C.